Owner's manual

E

DUCATI 620 Sport

Hearty welcome among Ducati fans! Please accept our best compliments for choosing a Ducati motorcycle. We think you will ride your Ducati motorcycle for long journeys as well as short daily trips. Ducati Motor Holding S.p.A. wishes you smooth and enjoyable riding.
We are steadily doing our best to improve our "Technical Assistance" service. For this reason, we recommend you to strictly follow the indications given in this manual, especially for motorcycle running-in. In this way, your Ducati motorbike will surely give you unforgettable emotions. Please contact our authorised service centres to have your motorcycle repaired or if you simply need advice.

Enjoy your ride!

Note

Ducati Motor Holding S.p.A. declines any liability whatsoever for any mistakes incurred in drawing up this manual. The information contained herein is valid at the time of going to print. Ducati Motor Holding S.p.A. reserves the right to make any changes required by the future development of the above-mentioned products.

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For your safety, as well as to preserve the warranty, reliability and worth of your motorcycle, use original Ducati spare parts only.

Warning

This manual forms an integral part of the motorcycle and - in the event the motorcycle is resold - must always be handed over to the new owner.

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GENERAL

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Warranty

In your own interest, and in order to guarantee product reliability, you are strongly advised to refer to a Ducati Dealer or Authorised Workshop for any servicing requiring particular technical expertise. Our highly skilled staff have access to the implements required to perform any servicing job at best, and use Ducati original spare parts only as the best guarantee for full interchangeability, smooth running and long life.

All Ducati motorcycles come with a "Warranty Card". The warranty does not apply to the motorcycles used in competitions. No motorcycle part may be tampered with, altered, or replaced with parts other than original Ducati spare parts during the warranty period, or the warranty will be automatically invalidated.

Symbols

Ducati Motor Holding S.p.A. advises you to read this booklet carefully so as to become familiar with your motorcycle. In case of any doubts, please call a Ducati Dealer or Authorised Workshop. The information contained herein will prove useful on your trips - and Ducati Motor Holding S.p.A. wishes you smooth, enjoyable riding - and will help you keep the performance of your motorcycle unchanged for a long time.

Warning
Failure to comply with these instructions may put you at risk and lead to severe injury or death.

Important
Possibility of damaging the motorcycle and/or its components.

Note
Additional information on the job being carried out.

*The terms **right** and **left** are referred to the motorcycle viewed with respect to the direction of travel.*

Useful information for safe riding

Warning
Read this section before riding your motorcycle.

Accidents are frequently due to inexperience. Always make sure you have your licence with you when riding; you need a valid licence to be entitled to ride your motorcycle.
Do not lend your motorcycle to inexperienced riders or who do not hold a valid licence.
Both rider and pillion passenger must ***always*** *wear a safety helmet.*
Wear proper clothing, with no loose items or accessories that may become tangled in the controls or limit your zone of vision.
Never start or run the engine indoors. Exhaust gases are poisonous and may lead to loss of consciousness or even death within a short time.
Both rider and pillion passenger should keep their feet on the footpegs when the motorcycle is in motion.
Always *hold the handlebars firmly with both hands so you will be ready for sudden changes of direction or in the road surface. The pillion passenger should* ***always*** *hold on to the suitable grab handle at the rear seat with both hands.*
Ride within the law and observe national and local rules.
Always *respect speed limits where these are posted. However, always adjust your speed to the visibility, road and traffic conditions you are riding in.*
Always *signal your intention to turn or pull to the next lane in good time using the suitable turn indicators.*
Be sure you are clearly visible and do not ride within the blind spot of vehicles ahead.
Be very careful when tackling road junctions, or when riding in the areas near exits from private grounds, car parks or on slip roads to access motorways.
Always *turn off the engine when refuelling.*
Be extremely careful not to spill fuel on the engine or on the exhaust pipe when refuelling.
Do not smoke when refuelling.
While refuelling, you may inhale noxious fuel vapours.
Should any fuel drops be spilled on your skin or clothing, immediately wash with soap and water and change your clothing.
Always *remove the key when you leave your motorcycle unattended.*
The engine, exhaust pipes, and mufflers stay hot for a long time.

Warning
The exhaust system might be hot, even after engine is switched off; pay particular attention not to touch exhaust system with any body part and do not park the vehicle next to inflammable material (wood, leaves etc.).

Park your motorcycle where no one is likely to hit it and use the side stand.
Never park on uneven or soft ground or your motorcycle may fall over.

Carrying the maximum load allowed

Your motorcycle is designed for long-distance riding, carrying the maximum load allowed in full safety. Even weight distribution is critical to preserving these safety features and avoiding trouble when performing sudden manoeuvres or riding on bumpy roads.

Information about carrying capacity

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The total weight of the motorcycle in running order including rider, pillion passenger, luggage and additional accessories should not exceed 385 Kg.

Arrange your luggage or heavy accessories in the lowest possible position and close to motorcycle centre.
Be sure to secure the luggage to the supports provided on the motorcycle as firmly as possible. Improperly secured luggage may affect stability.
Never fix bulky or heavy objects to the handlebar or to the front mudguard as this would affect stability and cause danger.
Do not insert any objects you may need to carry into the gaps of the frame as these may foul moving parts.
Make sure the tyres are inflated to the proper pressure indicated at page 58 and that they are in good condition.

Identification data

All Ducati motorcycles have two identification numbers, for frame (fig. 1) and engine (fig. 2).

Frame number

Engine number

Note

These numbers identify the motorcycle model and should always be indicated when ordering spare parts.

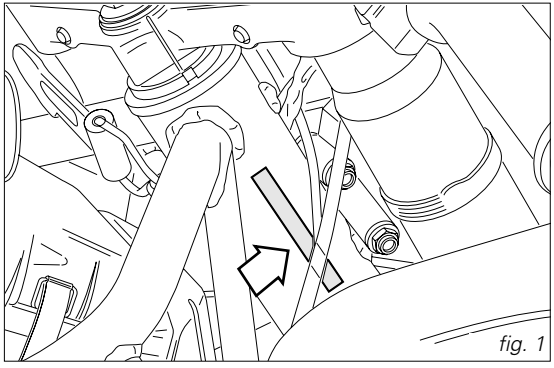

fig. 1

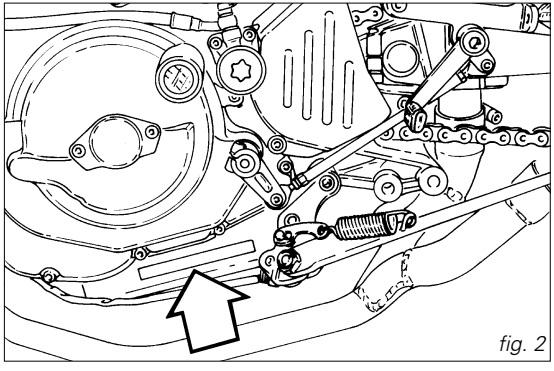

fig. 2

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CONTROLS

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Warning
This section details the position and function of all the controls you need to drive your motorcycle. Be sure to read this information carefully before you use the controls.

Position of motorcycle controls *(fig. 3)*

1) Instrument panel.
2) Key-operated ignition switch and steering lock.
3) Left switch.
4) Clutch lever.
5) Cold start lever.
6) Right switch.
7) Throttle twistgrip.
8) Front brake lever.
9) Gear change pedal.
10) Rear brake pedal.

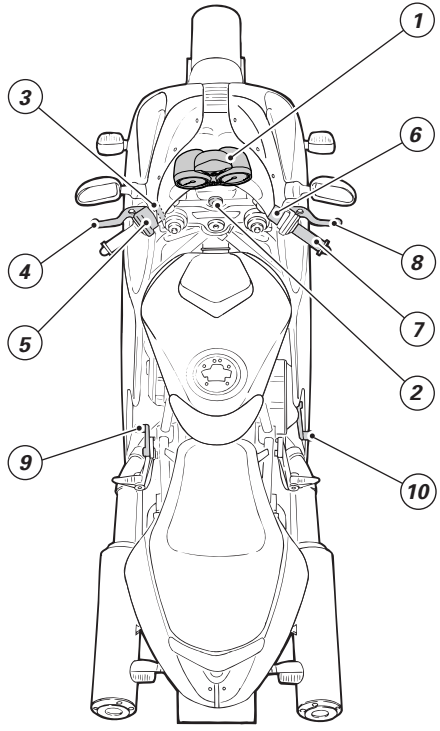

fig. 3

Instrument panel *(fig. 4)*
1) ***Blue light*** .
Comes on when high beam is on.
2) ***Green light*** .
Comes on and flashes when a turn indicator is on.
3) ***Yellow light*** .
Comes on when there are about 4 liters fuel left in the tank.
4) ***Green light N.***
Comes on when in neutral position.
5) ***Red light*** .
Comes on when engine oil pressure is too low. It briefly comes on when the ignition is switched to ***ON*** *and normally goes out a few seconds after engine starts. It may shortly come on when the engine is hot, however, it should go out as the engine revs up.*

Important
If this light stays on, stop the engine or it may suffer severe damage.

6) ***Orange light***
Comes on and flashes when the motorcycle is parked (Immobilizer on), it is also used for immobilizer diagnosis.

Note
When the Immobilizer is on, this light flashes for 24 hours and then goes out. The Immobilizer is still operating.

7) ***Orange EOBD light***
When on, engine operation is inhibited. It goes out after a few seconds (usually 1.8 - 2 sec.).
8) ***Speedometer*** *(km/h).*
Gives road speed.
a) ***LCD (1):***
- ***Odometer*** *(km).*
Gives total distance covered.
- ***Trip meter*** *(km).*
Gives distance covered since last resetting.
9) ***Revolution counter*** *(rpm).*
Shows the engine rotation speed/minute.
b) ***LCD (2):***
- ***Clock***
- ***Oil temperature***

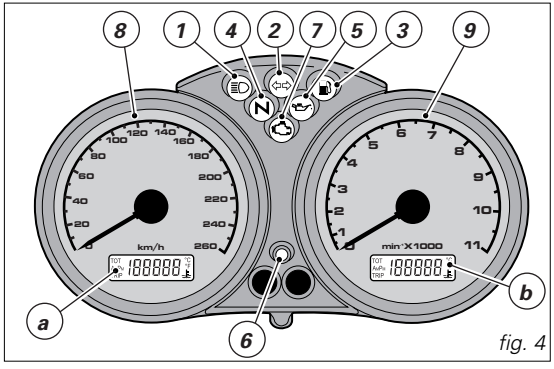

fig. 4

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LCD unit functions
*When the ignition key is turned to **ON**, the instrument panel carries out a **Check** of all instruments (pointers, display, lights) (see fig. 5 and 6).*

LCD (1)
*Turn the key to **ON** and press (B) (fig. 6) to display trip meter and odometer alternatively.*

Resetting the trip meter
*Keep (B) pressed (fig. 6) for more than 2 seconds. When the **TRIP** function is enabled (trip meter), display (LCD 1) will reset.*

LCD (2)
*Turn the key to **ON** and press (A) (fig. 6) to display clock and oil temperature.*

Setting the clock
*Press (**A**) for at least 2 seconds.*
*Press (**B**) to set **AM/PM**.*
*Press (**A**) to set hours; press (**B**) repeatedly to set correct hour.*
*Press (**A**) to set minutes.*
*Press (**B**) to increase the value. Keep the button pressed for more than 5 seconds to proceed faster.*
*Press (**A**) to quit this function.*

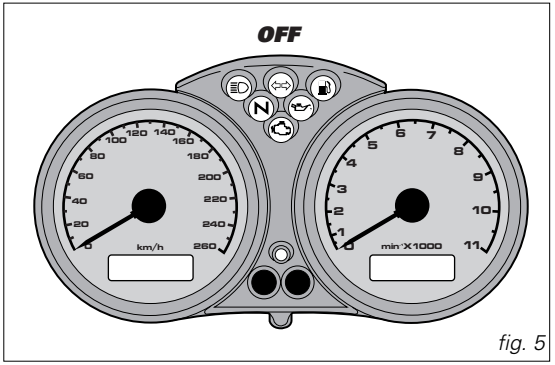


fig. 5

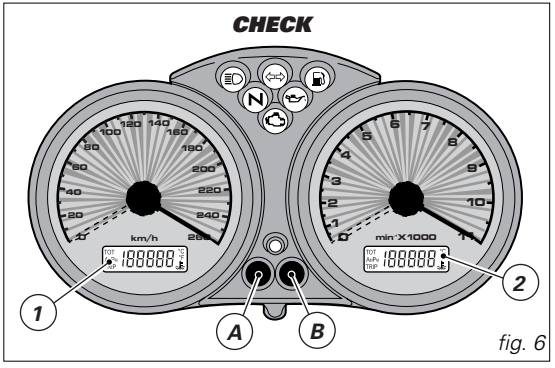
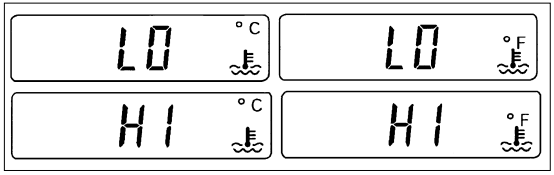
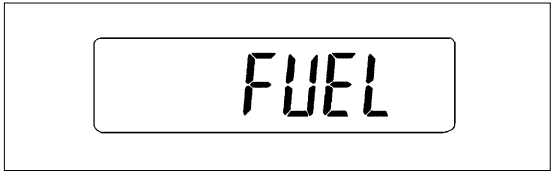


fig. 6

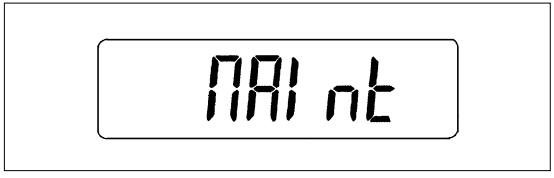
Oil temperature
*When the oil temperature goes below 50 °C (122 °F), "**LO**" will be displayed. "**HI**" will be displayed when the temperature exceeds 170 °C (338 °F).*



Fuel light
*"**FUEL"** will be displayed when the fuel warning light comes on.*



Maintenance indicator
*After the first 1,000 Km/621 m and then every 10,000 Km/ 6210 m, "**MAInt**" will be displayed for 5 seconds when turning the key to **ON.** It reminds you of the routine maintenance servicing to be done.*



Instrument panel lighting
*Turn the key to **ON** and press (B) (fig. 6) within 5 seconds to change instrument panel lighting power.*

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The immobilizer system

For improved anti-theft protection, the motorcycle is equipped with an IMMOBILIZER, an electronic system that inhibits engine operation whenever the ignition switch is turned off.
Accommodated in the handgrip of each ignition key is an electronic device that modulates an output signal. This signal is generated by a special antenna incorporated in the switch when the ignition is turned on and changes every time. The modulated signal acts as a "password" and tells the CPU that an "authorised" ignition key is being used to start up the engine. When the CPU recognises the signal, it enables engine start-up.

Keys *(fig. 7)*
The Owner receives a set of keys comprising:
- 1 RED key A
- 2 BLACK keys B

Warning
Red key A has a rubber cover for preserving it in perfect conditions and avoiding contact with other keys. Never remove this protection unless really needed.

The keys B are regular ignition keys and are used to:
- start up the engine
- open the lock of the fuel tank filler plug
- open the seat lock.

The key A performs the same functions as the keys B, and is also used to wipe off and re-program other black keys, if needed.

Note
The three keys have a small plate (1) attached that reports their identification number.

Warning
Keep the keys in different places. Store the plate (1) and the key A in a safe place.
It is also recommended to use always the same black key to start the bike.

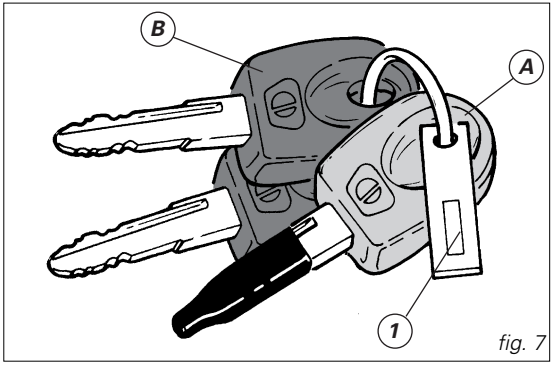

fig. 7

Code card

The keys come with a CODE CARD (fig. 8) that reports:

A) (fig. 9) the electronic code to be used to be used in case of engine block, i.e. bike did not start after ***key-ON****.*

B) (fig. 9) the part no. code for the keys to be reported to the DUCATI Service network when you are ordering any duplicate keys.

Important

Keep the CODE CARD in a safe place. However, it is advisable to keep the electronic code printed on the CODE CARD handy when you ride your motorcycle, in case it is necessary to remove engine block through the procedure that uses the throttle twistgrip.
In case of faulty immobilizer system, the following procedure gives the chance to disable "engine block" function -signalled by the orange ***EOBD*** *warning light that comes on immediately (7, fig. 4).*
But this operation can be carried out only if the electronic code indicated on the code card is known.

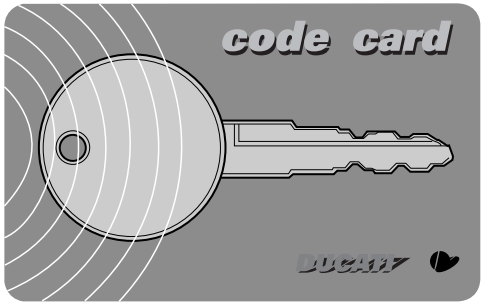

fig. 8

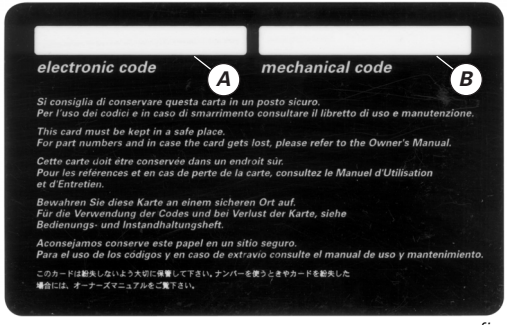

fig. 9

Procedure to disable immobilizer engine block through throttle twistgrip

*1) Turn the key to **ON** and fully open throttle. Keep it open. The **EOBD** warning light turns off after 8 seconds.*
*2) Release the throttle as soon as the **EOBD** warning light turns off.*
*3) **EOBD** pilot light will flash. Count a number of flashes corresponding to the first figure of the code, open full throttle and keep the position for 2 seconds, then release. In this way the input of one figure is acknowledged, **EOBD** pilot light comes on and stays on for 4 seconds. Carry out the same procedure for the following figures of the code. Failure to do so will cause the **EOBD** pilot light to flash 20 times, then it will stay on. This means that the procedure has been aborted. It will be necessary to turn the key to **OFF** and restart from point (1).*
4) Repeat operations described in point (3) up to the last figure of the code.
*5) Release the throttle twistgrip, if the code is correct, the **EOBD** warning light shall flash signalling that engine block has been disabled. The warning light turns off after 4 seconds.*
*If the code is **NOT** correct, the **EOBD** warning light stays on and it is then possible to turn the key to **OFF** and repeat the procedure, starting from point (1), as many times as necessary (infinite).*

Note

*Should the throttle twistgrip be released before the set time, the warning light turns on again. It is then necessary to bring the key to **OFF** and restart the procedure from point (1).*

Operation

*When the ignition key is turned to **OFF**, the immobilizer inhibits engine operation.*

*When the ignition key is turned back to **ON** to start the engine, the following happens:*

*1) if the CPU recognised the code, the **CODE** light on the instrument panel will flash briefly. This means that the immobilizer system has recognised the key code and enabled engine ignition. When you press the **START** button, the engine will start up.*

*2) If the **CODE** light stays on, it means that the code has not been recognised. When this is the case, turn the ignition key back to **OFF** and then to **ON** again. If the engine still does not start, try with another black key. If the other key does not work out either, contact the DUCATI Service network.*

*3) Should the **CODE** pilot light still be flashing, it means that an immobilizer system fault was reset (e.g. with the overriding procedure through throttle grip). Turn the key to OFF and back to ON, the immobilizer pilot light should go back to its normal operation (see point 1).*

Warning

The keys accommodate electronic components inside. If dropped or hit, they might damage.

Use only one key during the procedure. Failure to do so might prevent the system from recognizing the code of the key in use.

Duplicate keys

If you need any duplicate keys, contact the DUCATI Service network with all the keys you have left and your CODE CARD.

DUCATI Service will program new keys and re-program your original keys, up to 8 keys in total.

You may be asked to identify yourself as the legitimate owner of the motorcycle. Be sure you have any documents you might need to this end ready.

The codes of any keys not submitted will be wiped off from the memory to make those keys unserviceable in case they have been lost.

Note

If you sell your motorcycle, do not forget to give all keys and the CODE CARD to the new owner.

Ignition switch and steering lock *(fig. 10)*
It is located in front of the fuel tank and has four positions:
A) ***ON****: lights and engine on;*
B) ***OFF****: lights and engine off;*
C) ***LOCK****: steering locked;*
D) ***P****: parking light and steering lock.*

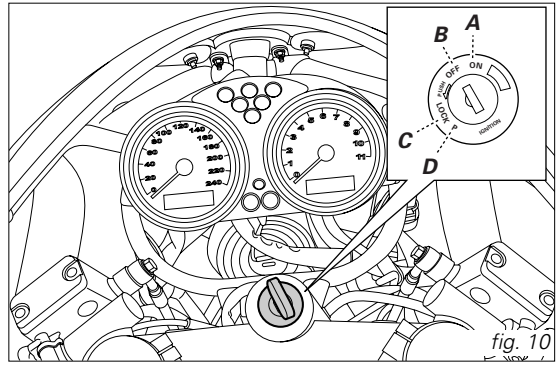

fig. 10

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Note
To move the key to the last two positions, press it down before turning it. Switching to (B), (C) and (D), you will be able to take the key out.

Warning
This vehicle is equipped with an energy-saving CPU. If the key stays ON for a long period but the ignition button is not pressed within 15 seconds, the CPU will stop operating to avoid current absorption. Move the key to ***OFF*** *and then to* ***ON*** *again.*

Left switch *(fig. 11)*
1) Dip switch, light dip switch, two positions:
position = low beam on;
position = high beam on.

2) Switch = 3-position turn indicator:
centre position = OFF;
position = left turn;
position = right turn.
To reset turn indicators, turn switch to central position and push in.

3) Button = warning horn.

4) Button = high-beam flasher.

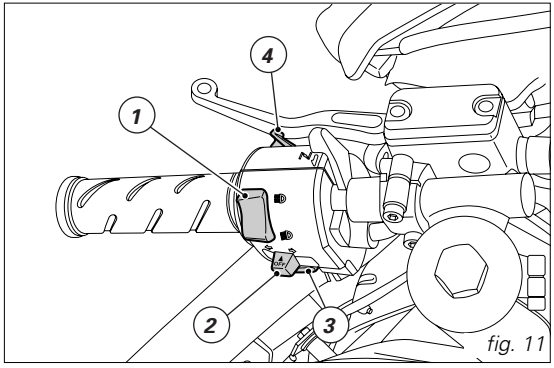

fig. 11

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Clutch lever *(fig. 12)*
When you pull in the lever (1), you will disengage the engine from the gearbox and therefore from the driving wheel. Using the clutch properly is essential to smooth riding, especially when moving off.

Important
Using the clutch properly will avoid damage to transmission parts and spare the engine.

Note
It is possible to start the engine with side stand down and the gearbox in neutral. When starting the bike with a gear engaged, pull the clutch lever (in this case the side stand must be up).

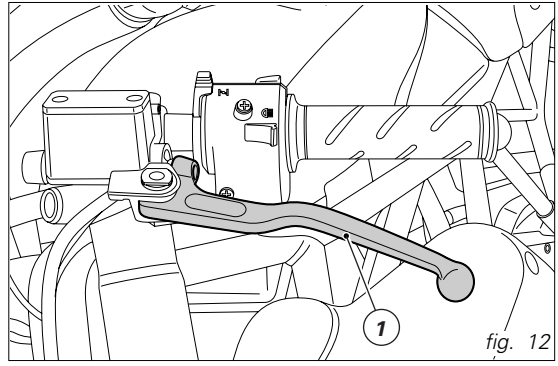

fig. 12

Cold start lever *(fig. 13)*
Use this device to start the engine from cold. It will increase the engine idling speed after starting.
Lever positions:
A) = closed
B) = fully open.
The lever can be opened and closed gradually to adjust speed until engine is fully warm (see pages 34-35).

Important
Never use the cold start device when the engine is warm or leave it open when riding.

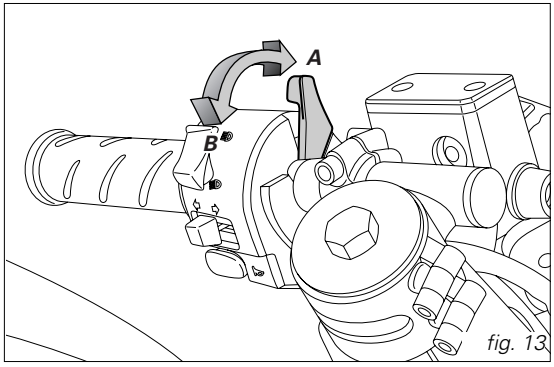

fig. 13

Right switch *(fig. 14)*
1) Switch, light switch, three positions:
right position **O** *= light off;*
centre position ≡D *= front and rear parking lights, number plate and instrument panel lights on;*
left position ☼ *= headlight, front and rear parking lights, number plate and instrument panel lights on.*

Note
This device is not fitted on the Australia and Japan versions.

2) Switch for ***ENGINE STOP****, two positions:*
position ⟲ ***(RUN)*** *= run.*
position ⊗ ***(OFF)*** *= stop.*

Warning
This switch is mainly intended for use in emergency cases when you need to stop the engine quickly. After stopping the engine, return the switch to the ⟲ *position to enable starting.*

Important
Riding with the lights on, stopping the engine using switch (2) and leaving the ignition key in the ***ON*** *position, may run the battery flat as the lights will remain on.*

3) Button ⏲ *= engine start.*

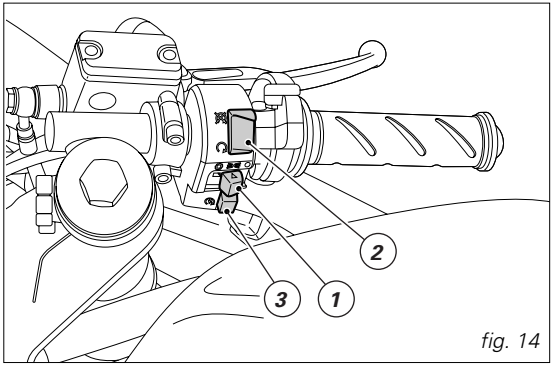

fig. 14

Throttle twistgrip *(fig. 15)*
The twistgrip (1) on the right handlebar opens the throttles. When released, it will spring back to the initial position (idling speed).

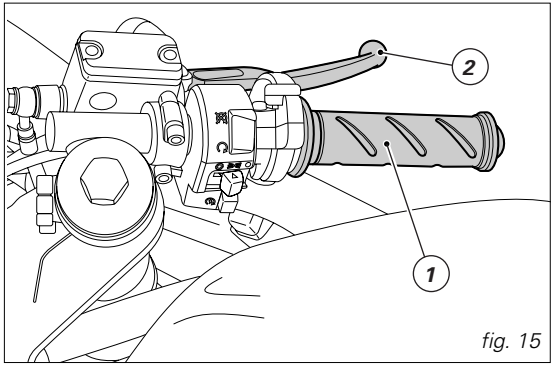

fig. 15

Front brake lever *(fig. 15)*
Pull in the lever (2) towards the twistgrip to operate the front brake. The system is hydraulically operated and you just need to pull the lever gently.

Warning
Please read the instructions on pages 36-37 before using these controls.

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Rear brake pedal *(fig. 16)*
Push down on the pedal (1) to apply the rear brake. The system is hydraulically operated.

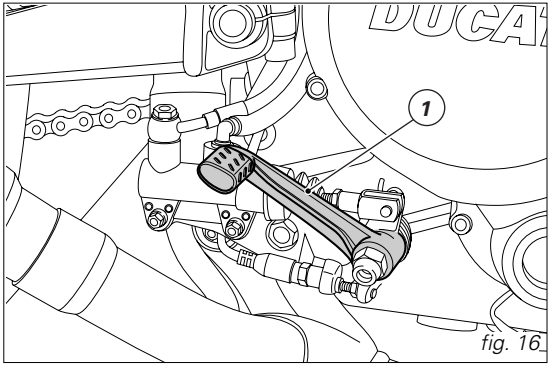

fig. 16

Gear change pedal *(fig. 17)*
The gear change pedal is at rest when in the central position ***N****, is moved up and down to change gears and then returns to the central position.*
down = push down on the pedal to engage 1st gear and to shift down. The ***N*** *light will go out.*
up = lift the pedal to engage the 2nd gear and then the 3rd, 4th and 5th gear.
Each time you move the pedal you will engage the next gear.

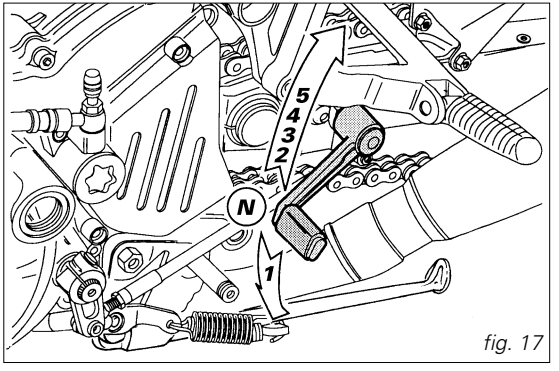

fig. 17

Setting the gear change and rear brake pedals

The gear change and rear brake pedals can be adjusted to suit the preferred riding position of each rider.
To set the gear change pedal, lock linkage (1) and loosen the check nuts (2) and (3).

Note
Nut (2) has a left-hand thread.

Fit an open-end wrench to the hexagon portion of linkage (1). Rotate linkage until setting pedal in the desired position.
Tighten both check nuts onto linkage.
To set the rear brake pedal,
loosen check nut (4).
Turn pedal travel adjusting screw (5) until pedal is in the desired position.
Tighten check nut (4).
Work pedal by hand to make sure it has 1.5 - 2 mm free play before brake begins to bite.
If not so, set the length of cylinder linkage as follows.
Loosen the check nut (6) on cylinder linkage.
Tighten linkage into fork (7) to increase play, or unscrew linkage to reduce it.
Tighten check nut (6) and check pedal free play again.

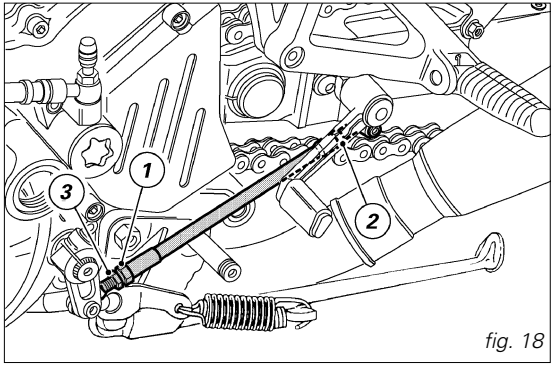

fig. 18

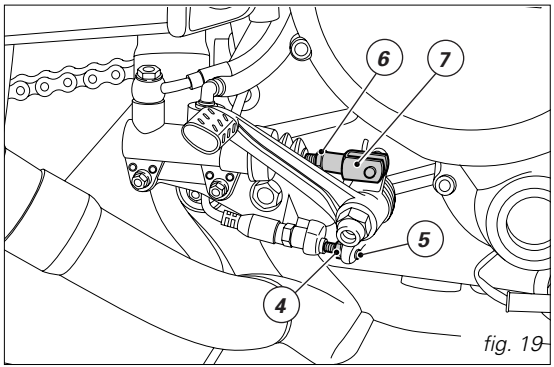

fig. 19

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Location *(fig. 20)*
1) Tank filler plug.
2) Seat catch and helmet hooks.
3) Side stand.
4) Rear view mirrors.
5) Rear shock absorber adjusters.
6) Cataliser

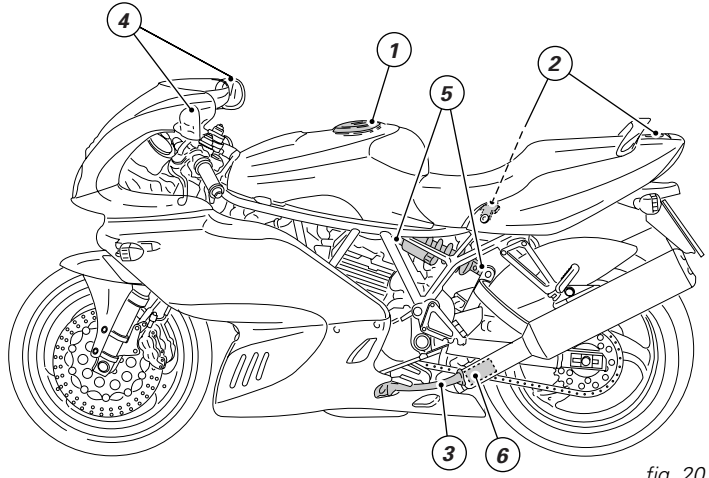

fig. 20

Tank filler plug *(fig. 21)*

Opening
Lift the protection lid (1) and fit the ignition key into the lock. Turn the key clockwise 1/4 turn to unlock. Lift the plug.

Closing
Refit the plug with the key in it and push it down into its seat.
Turn the key anticlockwise to its initial position and take it out. Close the lock protection lid (1).

Note
The plug can only be closed with the key in.

Warning
Always make sure you have properly refitted (see page 38) and closed the plug after each refuelling.

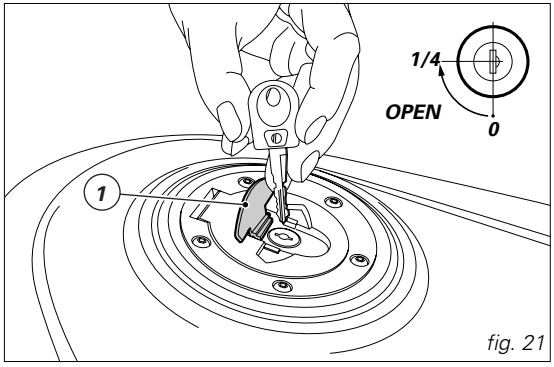

fig. 21

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Seat catch and helmet hooks

Opening *(fig. 22)*
Fit the ignition key into the lock (1) and turn the key clockwise until the rear end of the seat lifts up. Pull the seat backward (3) to slide it off its front holders.
At the front end of the compartment underneath the seat, there are the helmet hooks (2, fig. 23) for rider and pillion rider helmets. Hook the helmet straps onto the hooks and leave the helmets hanging outside. They will be locked safely when you refit the seat.

Warning
This system is intended to lock your helmet safely when you park your motorcycle. Never leave the helmet hanging from the hook when riding or it may get in the way and make you lose control of the motorcycle.

Closing
Make sure that all parts are arranged and secured properly inside the compartment under the seat. Slide the front ends (3) of the seat bottom underneath the frame U-bolt and push down on the rear end of the seat until you hear the catch click. Make sure the seat is firmly secured to the frame and take the key out of the lock (1).

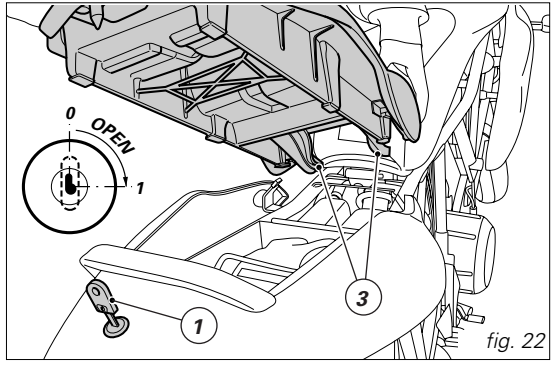

fig. 22

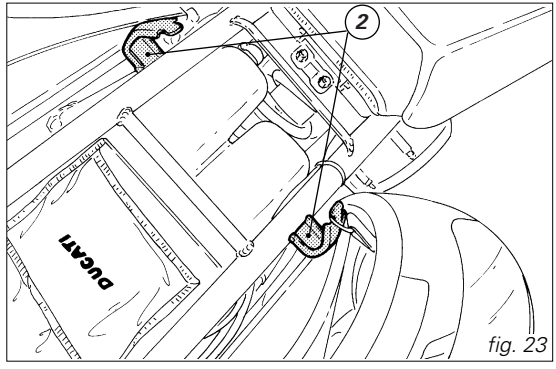

fig. 23

Side stand *(fig. 24)*

Important
Before lowering the side stand, make sure that the bearing surface is hard and flat.

Do not park on soft or pebbled ground or on asphalt melt by the sun heat and similar or the motorcycle may fall over.
When parking in downhill road tracts, always park the motorcycle with its rear wheel facing downhill.
To pull down the side stand, hold the motorcycle handlebars with both hands and push down on the thrust arm (1) with your foot until it is fully extended. Tilt the motorcycle until the side stand is resting on the ground.

Warning
Do not sit on the motorcycle when it is supported on the side stand.

To move the side stand to its rest position (horizontal position), tilt the motorcycle to the right and, at the same time, lift the thrust arm (1) with your foot.

Note
Check for proper operation of the stand mechanism (two springs, one into the other) and the safety sensor (2) at regular intervals.

Note
It is possible to start the engine with side stand down and the gearbox in neutral. When starting the bike with a gear engaged, pull the clutch lever (in this case the side stand must be up).

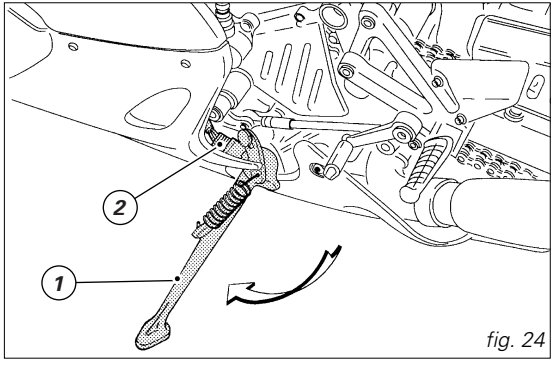

fig. 24

Shock absorber adjusters

Rear shock absorbers feature spring preload, rebound and compression adjustment.

The adjuster (1, fig. 26) on the shock absorber expansion reservoir - LH side of the frame - controls compression damping.

The adjuster (2, fig. 25) on the left of the connection holding the shock absorber to the swingarm controls rebound damping.

Turn the adjusters (1 and 2) clockwise to increase damping.

Two ring nuts (3, fig. 26) located on the top section of the shock absorber are used to adjust the outer spring preload.

To change spring preload, slacken the upper ring nut. Once preload has been set as required, tighten the upper ring nut. Then ***tighten*** *or* ***slacken*** *the lower ring to* ***increase*** *or* ***decrease*** *spring preload.*

Warning

Use a specific pin wrench to turn the preload adjusting nut. Be careful when turning the nut with the wrench, as the pin may slip out of the ring nut recess and you may hurt your hand hitting motorcycle parts.

Warning

The shock absorber is filled with gas under pressure and may cause severe damage if taken apart by unskilled persons.

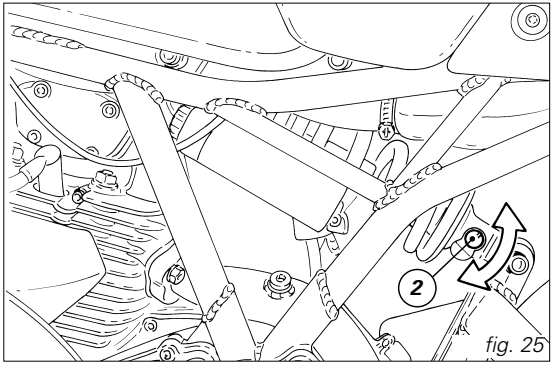

fig. 25

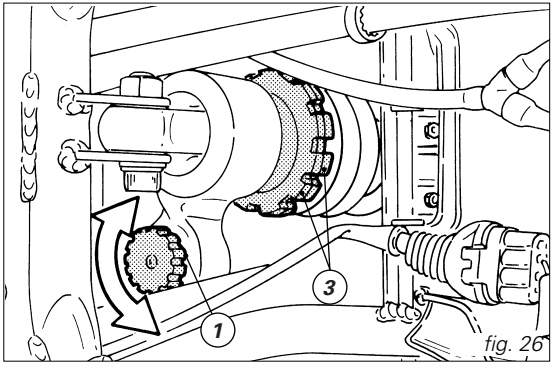

fig. 26

Shock absorber

STANDARD setting:

• Compression damping adjuster (1, fig. 27):
18 clicks.

• Rebound damping adjuster (2, fig. 28):
8 clicks.

STANDARD spring length:
177 mm

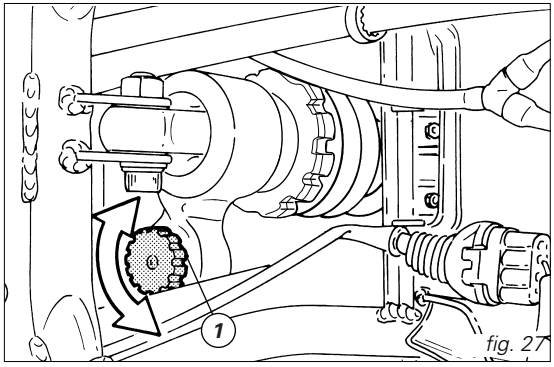

fig. 27

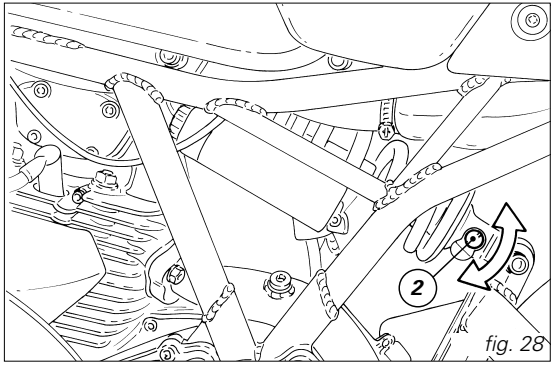

fig. 28

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Running-in recommendations

Max. rotation speed *(fig. 29)*
Rotation speed for running-in period and during standard use (rpm):
1) up to 1000 km;
2) from 1000 to 2500 km;
3) after 2500 km.

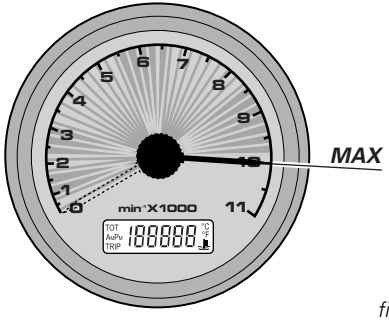

fig. 29

Up to 1000 km
During the first 1000 km, keep an eye on the revolution meter. The indicator must not exceed:
5500-6000 rpm.
During the first hours of riding, it is advisable to run the engine at varying load and rpm, though still within recommended limit. To this end, roads with plenty of bends and even hilly areas are ideal for a most efficient running-in of engine, brakes and suspensions.
For the first 100 km, use the brakes gently. Do not brake violently or keep brake applied for too long. This will enable a correct break-in of friction material on brake pads against brake discs.
For all mechanical moving parts to adapt to one another and above all not to adversely affect the life of basic engine parts, it is advisable to avoid harsh accelerations and not to run the engine at high rpm for too long, especially uphill.
Furthermore, the drive chain should be inspected frequently. Lubricate as required.

From 1000 to 2500 km
At this point, you can squeeze some more power out of your engine, being careful, however, to never exceed 7000 rpm.

Important
During the whole running-in period, the maintenance and service rules recommended in this manual should be observed carefully. Have the service inspections performed as recommended in the Warranty Card. Failure to comply with these rules will release Ducati Motor Holding S.p.A. from any liability whatsoever for resulting engine damage or shorter engine life.

After 2500 km
After running-in, never exceed the following values during the motorcycle standard use:
10,500 rpm.

Strict observance of running-in recommendations will ensure longer engine life and reduce the likelihood of overhauls and tune-ups.

Pre-ride checks

Warning
Failure to carry out these checks before riding, may lead to motorcycle damage and injury to rider and passenger.

Before riding, perform a thorough check-up on your bike as follows:
Fuel level in the tank
Check fuel level in the tank.
Fill tank if needed (page 38).
Engine oil level
Check oil level in the sump through the sight glass. Top up if needed (page 60).
Brake and clutch fluid
Check fluid level in the relevant reservoirs.
Tyre condition
Check tyre pressure and condition (page 58).
Controls
Work the brake, clutch, throttle and gear change controls (levers, pedals and twistgrips) and check for proper operation.
Lights and indicators
Make sure lights, indicators and horn work properly. Replace any burnt-out bulbs (page 53).
Key-operated locks
Check that fuel filler plug and seat catch locks are closed firmly.
Stand
Make sure side stand operates smoothly and is in the correct position (page 29).

Warning
In case of malfunctioning, do not start the motorcycle and call a Ducati Dealer or authorised workshop.

Starting the engine

Note
Follow the "High ambient temperature" procedure to start the engine when it is warm.

Warning
Before starting the engine, become familiar with the controls you will need to use when riding.

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Regular ambient temperature
(10 °C/50 °F to 35 °C/95 °F):
1) Move the ignition key to ***ON*** *(fig. 30). Make sure both the green light* ***N*** *and the red light on the instrument panel come on.*

Important
The oil pressure light should go out a few seconds after the engine has started (page 11).

Warning
The side stand must be fully up (in a horizontal position) as its safety sensor prevents engine start when down.

Note
It is possible to start the engine with side stand down and the gearbox in neutral. When starting the bike with a gear engaged, pull the clutch lever (in this case the side stand must be up).

2) Move the cold start lever to the B position (fig. 32).
3) Check that the stop switch (1, fig. 31) is positioned to ***(RUN),*** *then press the starter button (2).*
Let the engine start without using the throttle control.

Important
Never operate the electric start button more than 5 seconds at a time. If needed, allow 10 seconds before attempting to restart the engine.

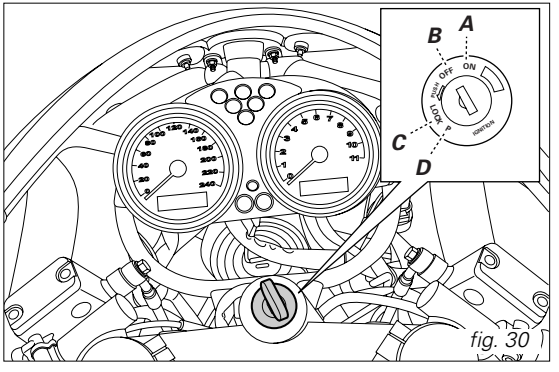

fig. 30

4) Move the cold start lever to the vertical position (A) to let engine idle at about 1400-1500 rpm.

Important
Do not rev up the engine when it is cold. Allow some time for oil to reach all points that need lubricating.

5) As the engine warms up, move the cold start lever gradually towards the vertical position (A). Once fully warm, the engine should hold idling rpm with the cold start shut down.

High ambient temperature *(over 35 °C/95 °F): Follow the same procedure for "Regular ambient temperature", however, do not use the cold start device.*

Cold ambient temperature *(below 10 °C/50 °F): Follow the procedure for "Regular ambient temperature", however allow 5 minutes for the engine to warm up (see step 5).*

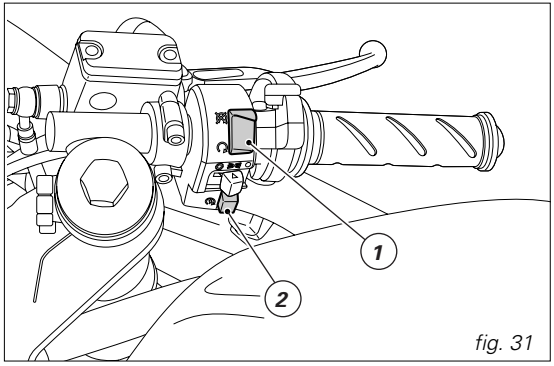

fig. 31

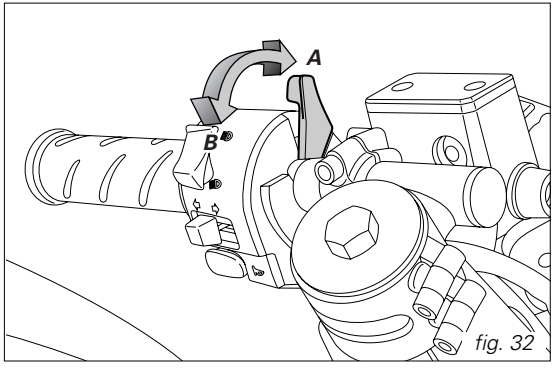

fig. 32

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Moving off

1) Disengage the clutch squeezing the control lever.
2) Push down on gear change lever sharply with the tip of your foot to engage the first gear.
3) Speed up engine, by turning the throttle twistgrip and slightly releasing the clutch lever at the same time. The motorcycle will start moving off.
4) Let go of clutch lever and speed up.
5) To shift up, close the throttle to slow down engine, disengage the clutch, lift the gear change lever and let go of clutch lever.
To shift down, release the twistgrip, pull the clutch control lever, shortly speed up to help gears synchronise, shift down and release the clutch.
The controls should be used correctly and timely: when riding uphill do not hesitate to shift down as soon as the motorcycle tends to slow down, so you will avoid stressing the engine and the motorcycle abnormally.

Important

Avoid harsh accelerations, as this may lead to misfiring and transmission snatching. The clutch lever should not be pulled longer than necessary after gear is engaged, or friction parts may overheat and wear out.

Braking

Slow down in time, shift down to engine-brake first and then brake applying both brakes. Pull the clutch lever before stopping the motorcycle, to avoid sudden engine stop.

Warning

Use both brake lever and pedal for effective braking. Using only one of the brakes will give you less braking power.
Never use brake controls harshly or violently or you may lock the wheels and lose control of the motorcycle.
When riding in the rain or on slippery surfaces, braking will become less effective. Always use the brakes very gently and carefully when riding under these conditions.
Any sudden manoeuvres may lead to loss of control.
When tackling long, high-gradient downhill road tracts, shift down gears to use engine braking. Apply one brake at a time and use brakes sparingly. Keeping the brakes applied all the time would cause the friction material to overheat and dangerously reduce braking power.
Underinflated tyres reduce braking efficiency, steering accuracy and road holding in a bend.

Stopping the motorcycle

If you let go of the throttle twistgrip, the motorcycle will slow down gradually and smoothly. Then, shift down releasing the clutch, and finally change from first to neutral. Apply brakes and you will bring the motorcycle to a complete stop.
To switch the engine off, simply turn the key to ***OFF*** *(page 18).*

Important

Never leave the key in the ***ON*** *position when engine is stopped, or this will damage the electric components.*

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Parking

Stop the motorcycle, then put it on the side stand (see page 29).
Turn the handlebar fully left and block it by pushing in the ignition key and turning it to the ***LOCK*** *position.*
If you park in a garage or other facilities, make sure that there is proper ventilation and that the motorcycle is not near a source of heat or sparks. You may leave the parking lights on by turning the key to position ***P****.*

Important

Do not leave the key turned to ***P*** *for long periods or the battery will run down.*
Never leave the ignition key in the switch when you are leaving your bike unattended.

Warning

The exhaust system might be hot, even after engine is switched off; pay particular attention not to touch exhaust system with any body part and do not park the vehicle next to inflammable material (wood, leaves etc.).

Warning

Using padlocks or locks that prevent motion (such as brake disc or crown sprocket locks and so on) is very dangerous and may affect motorcycle operation as well as the safety of rider and passenger.

Refuelling

Never overfill the tank when refuelling. Fuel should never be touching the rim of filler recess (fig. 33).

Warning

Use low-lead fuel having at least 95 fuel octane rating. Be sure there is no fuel trapped in the filler recess.

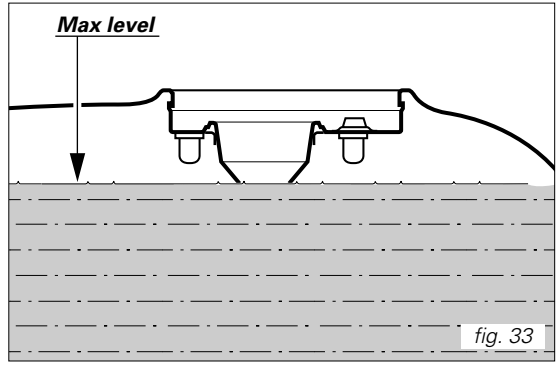

fig. 33

Tool kit and accessories *(fig. 34)*
Accommodated in the compartment under the seat is a bag (1) holding:
an Owner's manual;
a helmet fastening cable;
a tool kit for usual maintenance and checks stored in the top pocket.

To access this compartment, lift the seat by opening the catch (page 28).

The tool bag *(fig. 35)*
holds:
box wrench for spark plugs (2);
tommy bar (3);
double-bit screwdriver (4).
helmet cable (5).

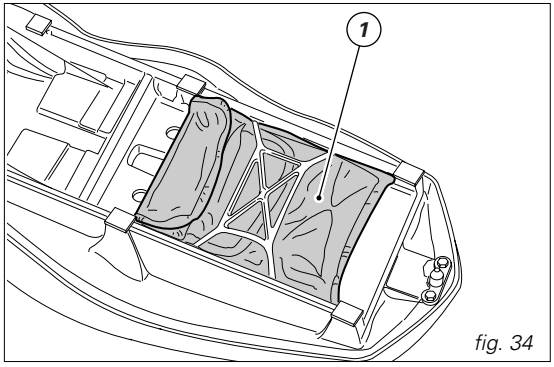

fig. 34

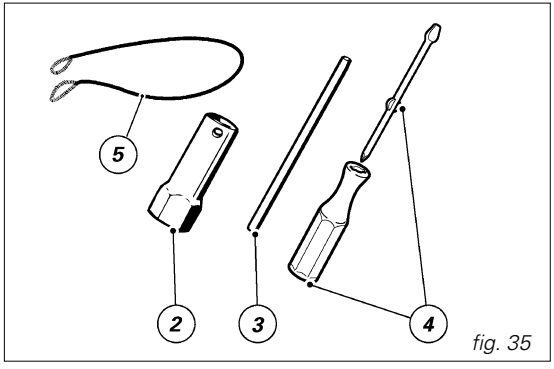

fig. 35

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Removing the fairing

Some servicing operations need the motorcycle fairing to be removed.

Warning

Firmly secure all removed parts when refitting them, otherwise some of them might suddenly come off when riding and you may loose control of your motorcycle.

Important

At reassembly always fit nylon washers when tightening fastening screws to avoid damage to painted parts and Plexiglas headlamp fairing. Some fastening screws are of the self-tapping type; do not overtighten, otherwise threading might damage thus avoiding further use.

Side body panels

Unscrew the three screws (1, fig. 36 and 37) that hold each body panel to the headlamp fairing.
Unscrew the screw (2) that holds each body panel to the frame.

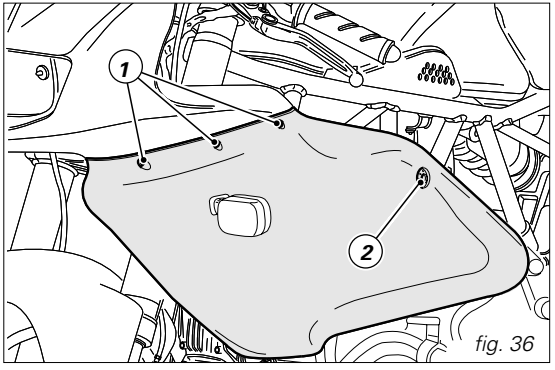

fig. 36

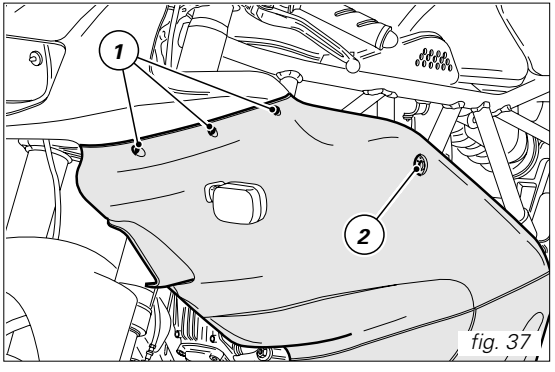

fig. 37

Half-faired version *(fig. 38)*
Unscrew the screw (3) that holds each body panel to the lower support bracket.
Disconnect the indicator connectors and remove the body panels.

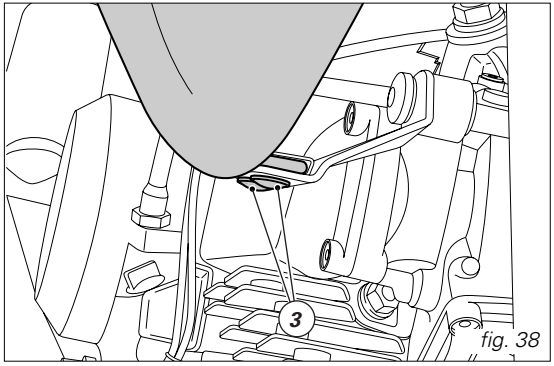

fig. 38

Fully-faired version *(fig. 39)*
Unscrew the screw (4) that holds the left body panel to the side stand fixing plate. Unscrew the screw (5) that holds the right body panel to the rear brake pedal shaft. Disconnect the indicator connectors.
Unscrew the four screws (6) that join the body panels together at the bottom end and remove the body panels. Omit this latter step if you wish to remove both body panels together. Simply slide them off from under the motorcycle. Be sure not to force them apart to avoid damage.

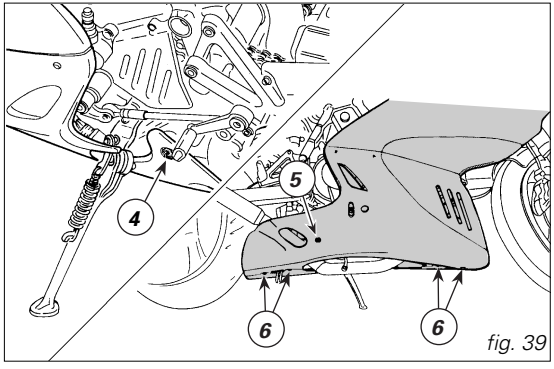

fig. 39

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Headlamp fairing

Unscrew the two nuts (1, fig. 40) that hold the rear view mirrors to the headlamp fairing and remove the rear view mirrors.

Unscrew the three screws (2, fig. 41) that hold each body panel to the headlamp fairing. Move the body panels slightly apart and unscrew the four screws (3, fig. 42) that fix the headlamp fairing to headlamp subframe on both sides.

Lift the headlamp off its front fastening pin (4, fig. 41) and over the headlamp.

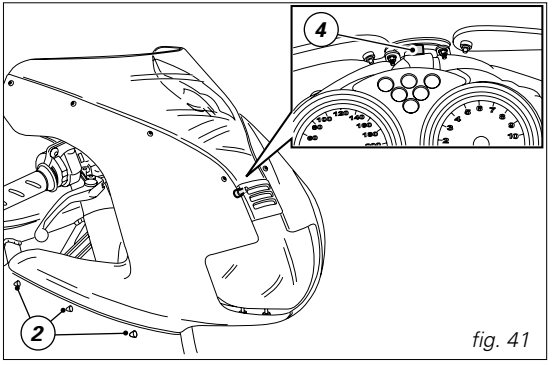


fig. 41

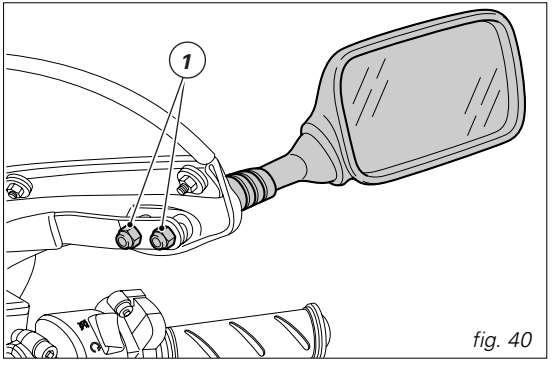


fig. 40

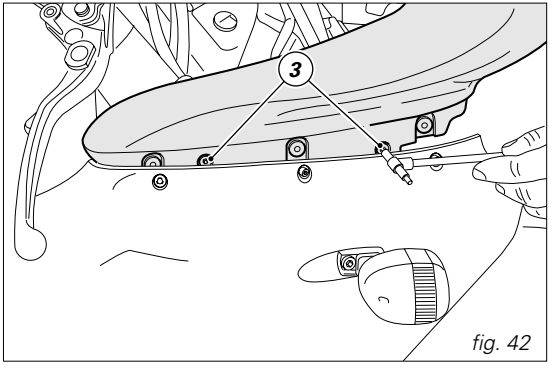


fig. 42

Lifting the fuel tank *(fig. 43 and 44)*
Remove the seat (see page 28).
Pull the clip (1, fig. 43) upwards to disengage it from the tank catch.
Lift the tank and unhook the service rod (2, fig. 44) from its retainer (3).
Place the tank onto the rod (2) fitting rod end into the hole in frame cross-member.

When finished, reverse the above procedure to refit all the parts you have removed.

Warning
Make sure the fuel in the tank is less than 4 litres (the reserve light on the instrument panel should be on) or fuel may leak out through the filler plug breather.
Lift the tank just enough to pull out service rod. Do not lift the tank exceedingly or you may damage the fuel sensor wire and the fuel lines.
When lowering the tank, be sure the fuel lines are not squeezed and the fuel sensor wire is not pushed too close to vertical cylinder head.

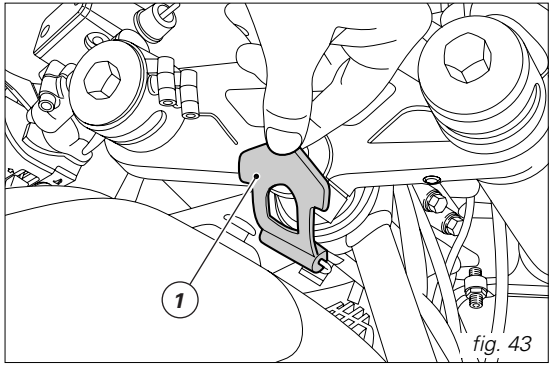


fig. 43

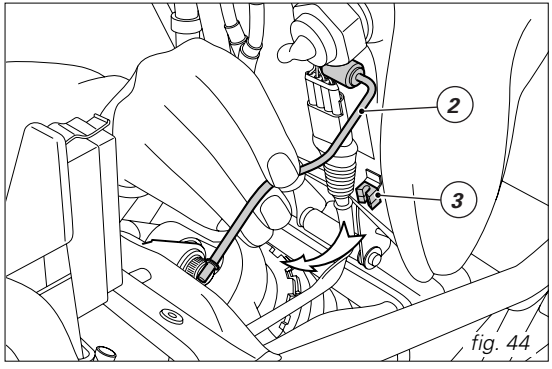


fig. 44

Changing the air filter *(fig. 45 and 46)*
Replace air filter at the required intervals shown in the routine maintenance chart (see Warranty Card). The air box is accessible after lifting the fuel tank.
Undo the clips (1) of the cover on both sides of the air box, then remove cover (2).
Remove the filter (3, fig. 46) and fit a new one.

Important
A clogged filter will reduce air intake, increase fuel consumption, reduce engine power, and foul the spark plugs. Do not use the motorcycle without filter or suspended matters could get into the engine and cause damage.

Install the filter properly into its seat in the air box as shown in figure 46 and refit all the parts you have removed.

Important
If you are using the motorcycle on dusty or very wet roads, replace filter more frequently than recommended intervals (see Warranty Card).

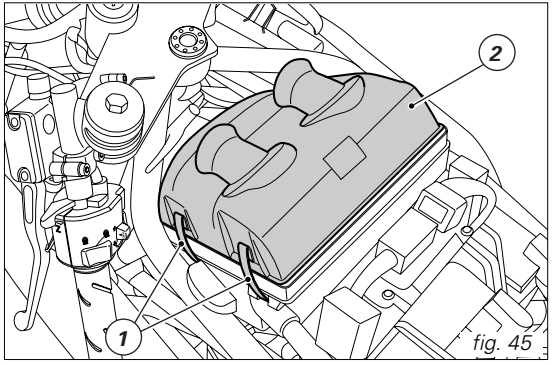


fig. 45

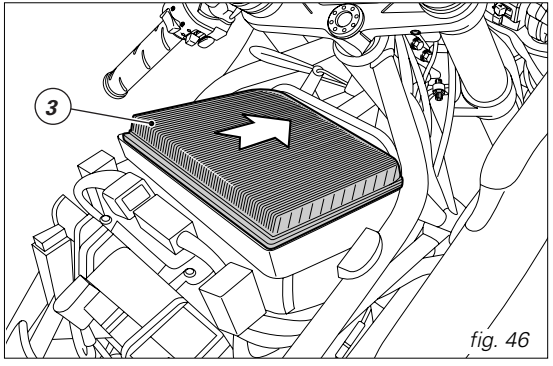


fig. 46

Checking brake and clutch fluid level

Fluid level should never fall below the MIN mark on each reservoir (fig. 47 to 49).
If level drops below the limit, air might get into the circuit and affect the operation of the system involved.
Brake and clutch fluid must be topped up and changed at the intervals specified in the routine maintenance chart (see Warranty Card) by a Ducati Dealer or Authorised Workshop.

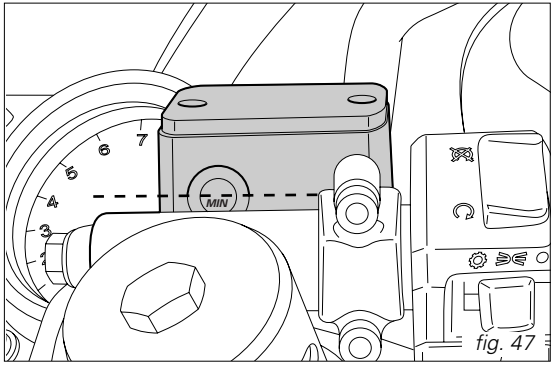


fig. 47

Important
It is recommended all brake and clutch lines be changed every four years.

Brake system

If you find exceeding play on brake lever or pedal and brake pads are still in good condition, contact your Ducati Dealer or Authorised Workshop to have the system inspected and any air drained out of the circuit.

Warning
Brake and clutch fluid and will damage paintwork and plastic parts if accidentally spilled.
Hydraulic oil is corrosive; it may cause damage and lead to severe injuries.
Never mix different quality oils.
Check seals for proper sealing.

Clutch system

If the control lever has exceeding play and the transmission snatches or jams as you try to engage a gear, it means that there is air in the circuit. Contact your Ducati Dealer or Authorised Workshop to have the system inspected and air drained out.

Warning

Brake fluid level will increase as clutch plate friction material wears down. Do not exceed specified level (3 mm above minimum level).

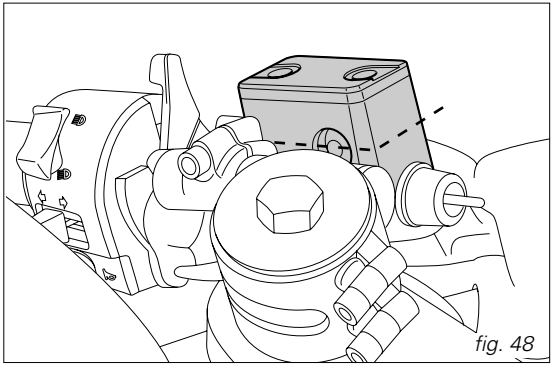


fig. 48

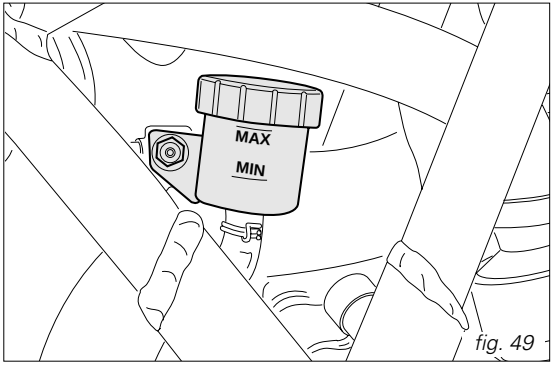


fig. 49

Checking brake pads for wear *(fig. 50)*

Front brake
To facilitate inspection without removing the pads from the calipers, brake pads have a wear mark. If the grooves in the friction material are still visible, the pad is still in good condition.

Rear brake
The friction material on each pad should be at least 1 mm thick.

Important
Have the brake pads replaced at a Ducati Dealer or Authorised Workshop.

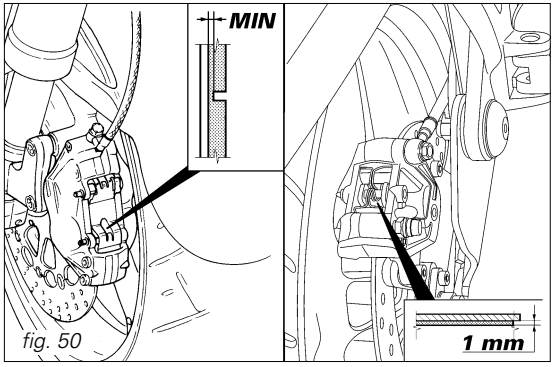


fig. 50

E

Lubricating joints

The condition of the outer sheaths of the throttle and cold start cables should be checked at regular intervals. The sheaths should show no signs of squeezing or cracking. Work the controls to make sure the cable slides smoothly inside the sheath: if you feel any friction or hard spots, have the cable replaced by your Ducati Dealer or Authorised Workshop. To prevent these failures, smear the ends of the Bowden cables with SHELL Advance Grease or Retinax LX2 at regular intervals.

For the throttle cable, it is best to remove the cover (1, fig. 51) by unscrewing the two fastening screws (2) and then grease the cable end and the pulley.

Warning

When refitting the cover, be sure to slide the cable properly onto the suitable pulley and inside the guide in the cover (3, fig. 52).

Refit the cover and tighten the screws (2).

To ensure smooth operation of side stand joint, clean off any dirt and apply SHELL Alvania R3 at all points exposed to friction.

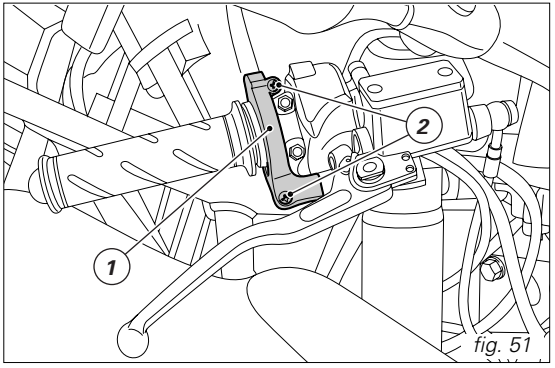


fig. 51

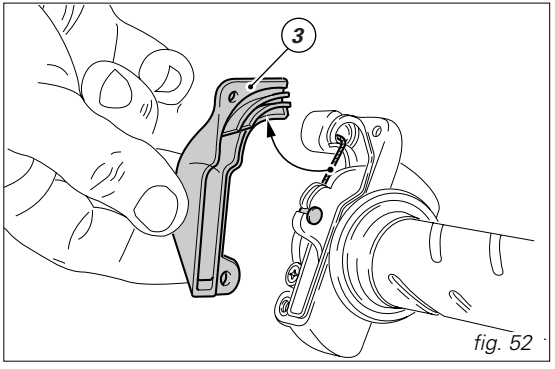


fig. 52

Throttle cable adjustment

The throttle twistgrip must have a free play of ***1.5 - 2 mm*** *measured at the edge of the twistgrip, at all positions of the handlebars. If it needs adjusting, use the suitable adjuster (1, fig. 53) provided on the throttle control.*

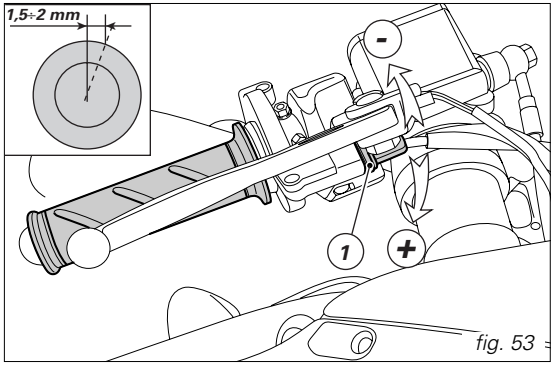


fig. 53

E

Charging the battery *(fig. 54)*
Before charging the battery, it is best to remove it from the motorcycle.
*Always disconnect the black negative terminal (**-**) first, and then the red positive terminal (**+**).*
Undo the straps (1) and remove the battery.

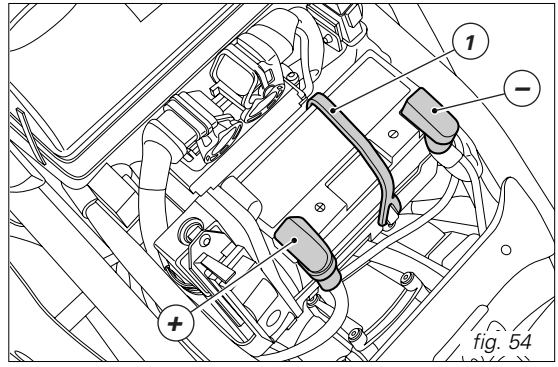


fig. 54

Warning
Batteries develop explosive gases: keep battery away from heat sources and flames.

Charge the battery in a well ventilated room.
*Connect the battery charger leads to the battery terminals (red to positive terminal **+**, black to negative terminal **-**).*

Important
Make sure the charger is off when you connect the battery to it, or you might get sparks at the battery terminals that could ignite the gases inside the cells.
Always connect the red positive terminal first.

Warning
Keep the battery out of the reach of children.
Charge the battery at 1 A for 5-10 hours.

Chain adjustment

Turn the rear wheel slowly until you find the position where chain tension is tightest.
Put motorcycle on the side stand and push the chain up pressing with a finger at mid-length of swingarm. The lower stretch of chain must have a slack of

25-30 mm.

chain tension is adjusted as follows:
Slacken the nut (1, fig. 56) of the wheel shaft, tighten (turn clockwise) or slacken the screw (2) on either side of the swingarm equally to increase or reduce chain tension. If you are slackening the chain, you will have to push the wheel forward.

Important

Improper chain tension will lead to early wear of transmission parts.

Make sure you have adjusted to the same setting marks on both sides of the swingarm. Refer to pointer on slider (3, fig. 56). This will ensure perfect wheel alignment. Grease the thread of the wheel shaft nut (1) with SHELL Retinax HDX2 grease and torque nut to 72 Nm.

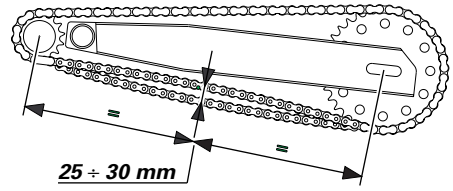


fig. 55

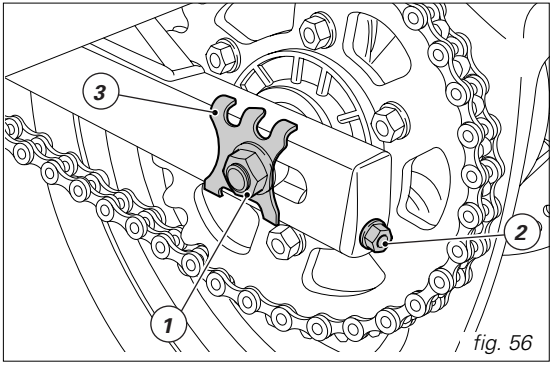


fig. 56

E

Chain lubrication

The chain fitted on your motorcycle has O-rings that keep dirt out of and lubricant inside the sliding parts. The seals might be irreparably damaged if the chain is cleaned using any solvent other than those specific for O-ring chains or washed using steam or water jets. After cleaning, blow the chain dry or dry it using absorbent material and apply SHELL Advance Chain or Advance Teflon Chain on each link.

Important

Using non-specific lubricants may lead to severe damage to chain, front and rear sprocket.

Replacing bulbs

Before replacing a burnt-out bulb, make sure that the new bulb complies with voltage and wattage as specified on page 71, "Electric System", for that lighting device. Always test the new lamp before refitting the parts you have removed.

Headlamp

To gain access to headlamp bulbs you will need to work behind the headlamp fairing.
Remove connector (1, fig. 57) from the bulb.
Pull the tab (A) to remove the protective cap.
Release the clip (2, fig. 58) that holds the bulb in place and take the bulb out of its socket. Fit a new bulb.

Note

Be careful to hold the new bulb at the base only. Never touch the transparent body with your fingers or it will blacken resulting in reduced bulb brilliancy.

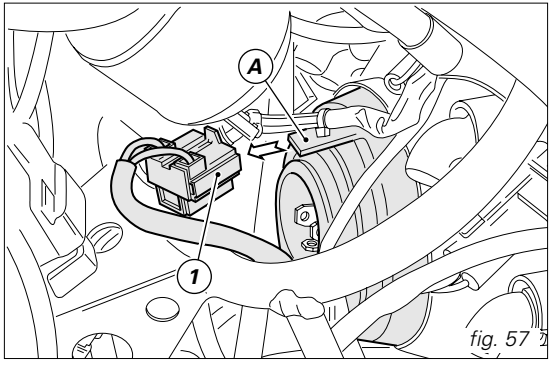


fig. 57

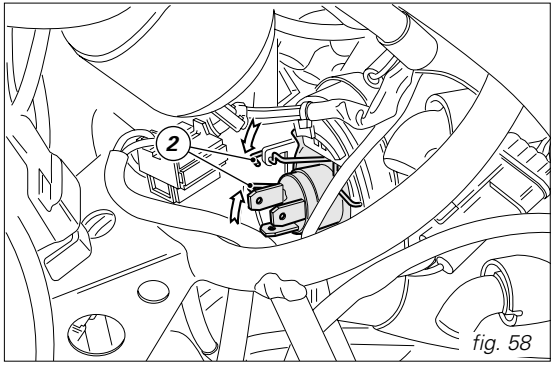


fig. 58

E

Reassembly

Insert the locating pegs of the bulb base into their seats to obtain correct alignment.
Hook the clip (2) to the headlamp holders; reconnect the connector (1) you have detached previously and refit the rubber cover.

The parking light bulb is fitted on the top section of the headlamp body. To change it, pull out the bulb holder (3, fig. 59) from headlamp body.
Remove the bulb and fit a new one.

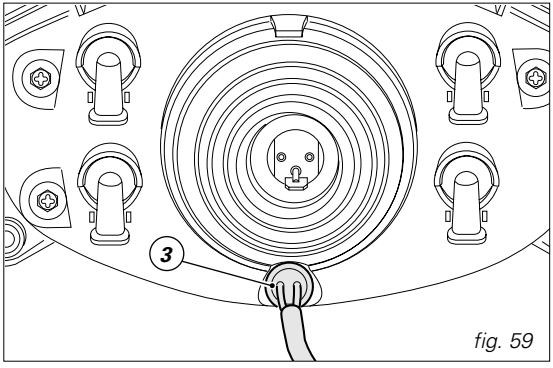


fig. 59

Turn indicators *(fig. 60)*
Remove the screw (1) and detach the glass (2) from the indicator body holder.
The bulb has a bayonet-type fitting: press and rotate anti-clockwise to remove; fit the spare bulb by pressing and turning clockwise until it clicks.
Refit the glass sliding the small tab (A) into the suitable slot in the indicator body and tighten the screw (1).

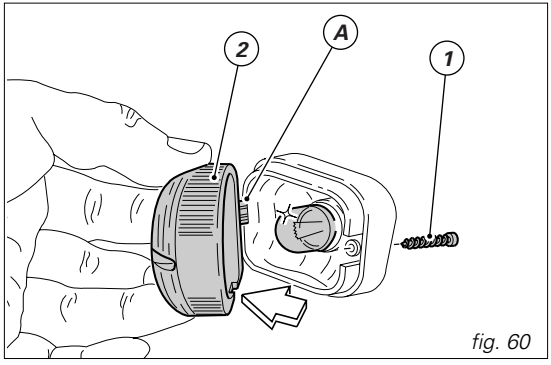


fig. 60

Number plate light *(fig. 61)*
To expose the number plate light bulb, withdraw the lamp holder from the number plate holder, then extract the bulb and replace it.

Note
The bulb holder has a tag (A) to aid removal from number plate holder without risking to tear the cables.

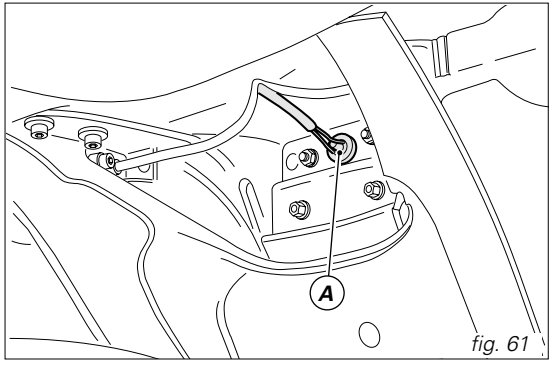


fig. 61

Stop light

To replace the stop and parking light bulb, unscrew the two screws (1, fig. 62) that secure the glass and remove glass. The bulb has a bayonet-type fitting: press and rotate anti-clockwise to remove; fit the spare bulb by pressing and turning clockwise until it clicks (fig. 63). Refit the glass and tighten the screws (1).

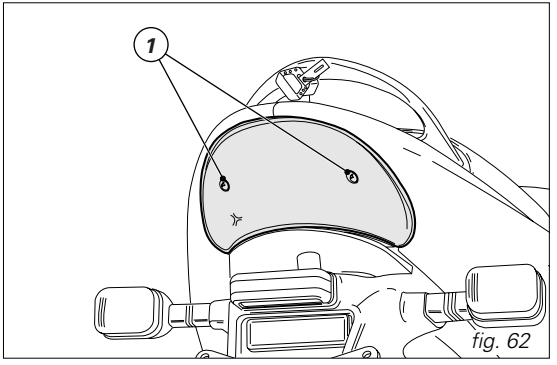


fig. 62

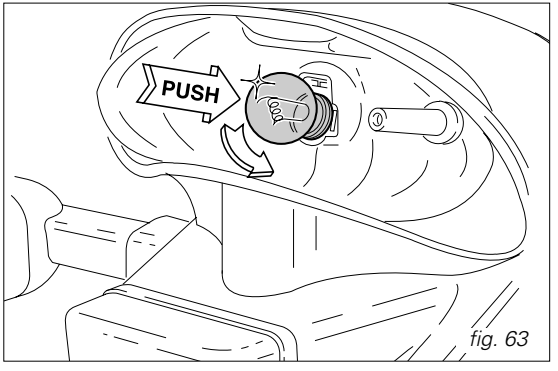


fig. 63

Beam setting *(fig. 64)*
When checking beam setting, put the motorcycle upright. Tyres should be inflated at the correct pressure and one person should be sitting astride the motorcycle, keeping it at right angles to its longitudinal axis. Place the motorcycle opposite a wall or a screen, 10 meters apart from it, then draw a horizontal line dictated by headlamp centre and a vertical one in line with the longitudinal axis of motorcycle.
If possible, perform this check in dim light.
Switch on the low beam. The height of the light spot (measured at the upper limit between dark and lighted-up area) should not exceed 9/10th of the height from ground of headlamp centre.

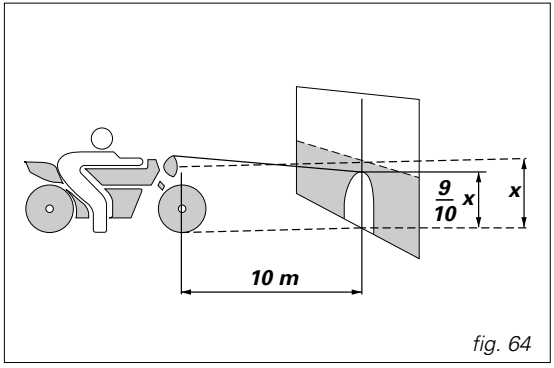


fig. 64

Note
The procedure described here is in compliance with the "Italian Standard" establishing the maximum height of the light beam. Owners in other countries will adapt said procedure to the provisions in force in their countries.

The height of the light beam *can be corrected using the screw (1, fig. 65) on the left side of the headlamp. Turn the screw clockwise to lower the beam, anticlockwise to raise it.*

The side position of the headlamp *is adjusted using the adjusting screw (2, fig. 65) on the right side of headlamp. Turn the screw clockwise to move the beam to the right, anticlockwise to move it to the left.*

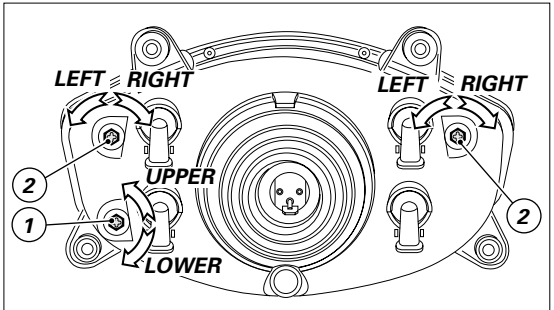


fig. 65

Tyre pressures
Front tyre:
2.1-2.2 bar
Rear tyre:
2.1-2.3 bar

As tyre pressure is affected by temperature and altitude variations, you are advised to check and adjust it whenever you are riding in areas where ample variations in temperature or altitude occur.

Important
Check and set tyre pressure when tyres are cold.

To avoid front wheel rim distortion, when riding on bumpy roads, increase front tyre pressure by 0.2 - 0.3 bar.

Tyre repair or replacement

In the event of a tiny puncture, tubeless tyres will take a long time to deflate, as they tend to keep air inside. If you find low pressure on one tyre, check the tyre for punctures.

Warning

A tyre must be replaced when punctured.
Only fit tyres of the same type as original-equipment tyres.
Be sure to tighten the valve caps securely to avoid leaks when riding. Never use tube type tyres. Failure to heed this warning may lead to sudden tyre bursting and to serious danger to rider and passenger.

After replacing a tyre, the wheel must be balanced.

Important

Do not remove or shift the wheel balancing weights.

Note

If tyres need replacing, contact a Ducati Dealer or Authorised Workshop to make sure wheels are removed and refitted correctly.

Minimum tread depth

Measure tread depth (S, fig. 66) at the point where tread is most worn. It should not be less than ***2 mm*** *and anyway not below the legal limit.*

Important

Visually inspect the tyres at regular intervals for cracks and cuts, especially on the side walls, bulges or large spots that are indicative of internal damage.
Replace them if badly damaged.
Remove any stones or other foreign bodies caught in the tread.

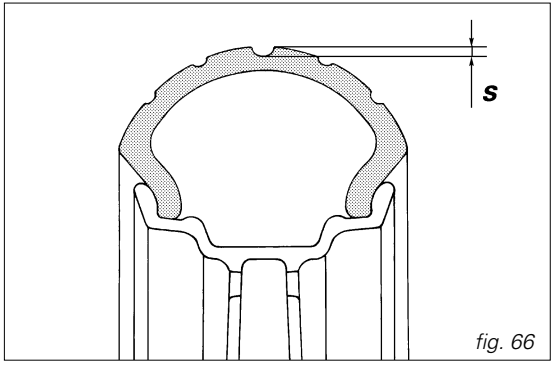


fig. 66

Checking engine oil level *(fig. 67)*
Engine oil level can be checked through the sight glass (1) provided on the clutch cover.
When checking oil level, the motorcycle should be upright and the engine warm.
Allow a few minutes for oil to settle to a steady level after stopping the engine.
Oil level should be between the marks near the sight glass.
Top up oil level with SHELL Advance Ultra 4, if low.
Undo the filler plug (2) and top up to correct level.
Refit the plug.

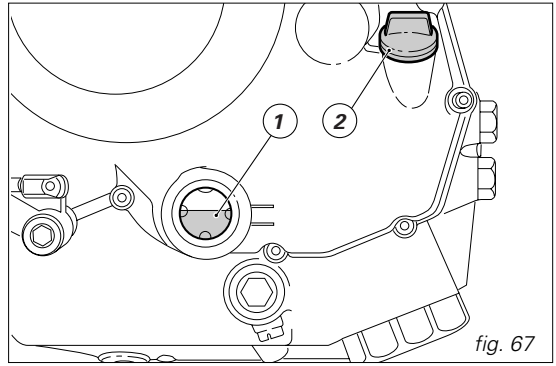
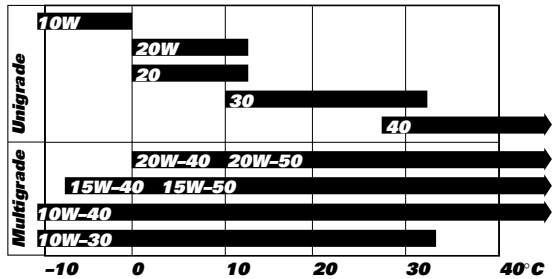


fig. 67

Important
Engine oil and oil filters must be changed by a Ducati dealer or authorized workshop at regular intervals, as specified in the routine maintenance chart (see Warranty Card).

Viscosity
SAE 10W-40
The other viscosity degrees indicated in the table can be used if the local average temperature is within the limits specified for that oil viscosity.



Cleaning and replacing the spark plugs *(fig. 68)*
Spark plugs are essential to smooth engine running and should be checked at regular intervals. This is done quite easily and quickly and provides a good measure of engine condition.
Remove the LH fairing, remove the spark plug caps from the cylinder head using the wrench supplied with the bike.

Check the colour of the insulating ceramic material of the central electrode: a light brown, even colour is a sign of good engine condition. If colour has altered or you find any dark deposits, change the spark plug and report this to your Dealer or authorised workshop.
Check wear on the central electrode. If it looks worn out or has a vitrified appearance, change the spark plug.
Check electrode gap: it should be ***0.6-0.7 mm***.

Important
If the gap needs adjusting, be very careful when bending the side electrode. If gap is too wide or too close, engine performance will be affected. This could also cause misfiring or irregular idling.
Clean the electrode and the insulating material accurately using a small metal brush and check seal condition.
Clean the seat in the cylinder head. Be careful not to let any foreign matters fall into the combustion chamber.

Refit spark plug into cylinder head. Tighten until thread is fully into the head. Tighten the spark plug to 20 Nm.
If you do not have a torque wrench, you can use the wrench supplied with the tool kit to tighten the spark plug an additional 1/2 turn.

Important
Never use spark plugs with a heat rating other than recommended or a thread length other than standard. Spark plugs should be tightened properly.

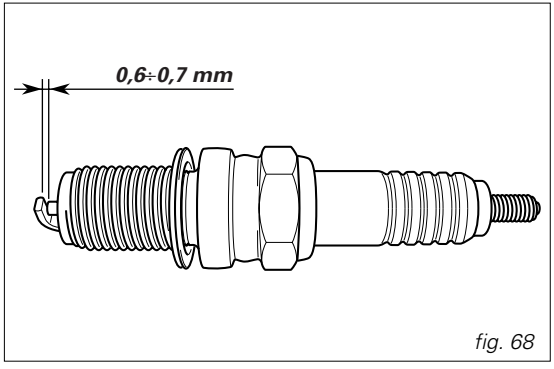


fig. 68

Cleaning the motorcycle

To preserve the finish of metal parts and paintwork, wash and clean your motorcycle at regular intervals, anyway according to the road conditions you ride in.
Use specific products only. Prefer biodegradable products. Avoid aggressive detergents or solvents.

Important

Do not wash your motorcycle right after use. When the motorcycle is still hot, water drops will evaporate faster and spot hot surfaces.
Never clean the motorcycle using hot or high-pressure water jets. Cleaning the motorcycle with water cleaners may lead to seizure or severe failure of front fork, wheel hub assembly, electric system, front fork seals, air inlets or exhaust silencers and adversely affect the operation of motorcycle safety features.

If needed, clean off stubborn dirt or exceeding grease from engine parts using a degreasing agent. Be sure to avoid contact with drive parts (chain, sprockets, etc.). Rinse with warm water and dry all surfaces with chamois leather.

Warning

Loss of braking may occur immediately after washing the motorcycle.

Never grease or lubricate the brake discs. Loss of braking and further accidents may occur. Clean the discs with an oil-free solvent.

Storing the bike away

If the motorcycle is to be left unridden over long periods, it is advisable to carry out the following operations before storing it away:
clean the motorcycle;
drain all fuel from tank;
pour a few drops of engine oil into the cylinders through the spark plug seats, then crank the engine by hand a few times so a protective film of oil will spread on cylinder inner walls;
place the motorcycle on the service stand;
disconnect and remove the battery. Battery should be checked and charged whenever the motorcycle has been left unridden for over a month;
protect the motorcycle with a suitable canvas available from Ducati Performance. This will protect paintwork and let condensate breathe out.

Important notes

Some countries, such as France, Germany, Great Britain, Switzerland, etc. have compulsory emission and noise standards that include mandatory inspections at regular intervals.
It is the Owner's responsibility to have any parts not in compliance with the standards in force in his/her country replaced with spare parts complying with local law.

E

Overall dimensions *(mm) (fig. 69)*

Weights
Dry weight:
182 Kg.
Carrying full load:
385 Kg

Warning
Failure to observe weight limits could result in poor handling and impair the performance of your motorcycle, and you may lose control of the motorcycle.

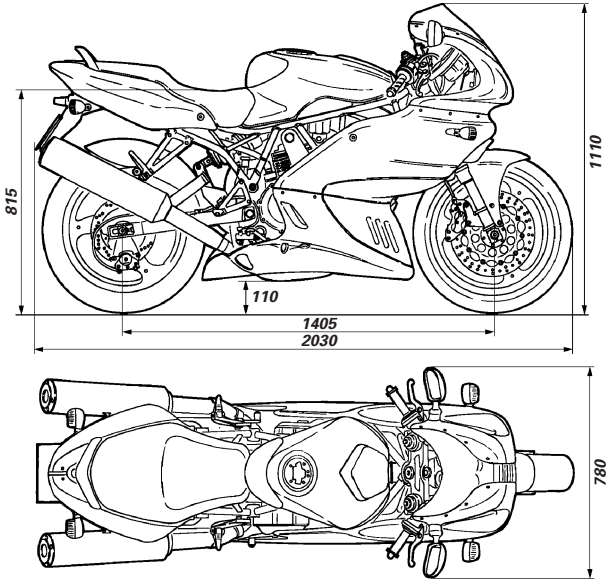


fig. 69

Top-ups	***Type of fluid***	***cu dm (litres)***
Fuel tank, including a reserve of 4 cu dm (liters)	*Unleaded fuel 95 fuel octane rating (at least)*	*16*
Oil sump and oil filter	*SHELL Advance Ultra 4*	*3.3*
Front/Rear brake and clutch circuits	*Special fluid for hydraulic systems SHELL-Advance Brake DOT 4*	*–*
Protectant for electric contacts	*Spray for electric systems SHELL-Advance Contact Cleaner*	*–*
Front fork	*SHELL-Advance Fork 7.5 or Donax TA*	*(each leg) 0.410*

Important
Do not use any additives in fuel or lubricants.

Engine

Twin cylinder, four-stroke, 90° "L" type, longitudinal.
Bore:
80 mm.
Stroke:
61.5 mm.
Total displacement:
618 c. c..
Compression ratio ±0.5:1:
10.5.
Max. power at crankshaft (95/1/CE):
45 kW – 61 HP at 8750 rpm.
Max torque at crankshaft (95/1/CE):
54 Nm-5.5 Kgm at 6500 rpm.

Derated version

Max. power at crankshaft (95/1/CE):
24 kW – 32.6 HP at 9500 rpm.
Max torque at crankshaft (95/1/CE):
42 Nm-4.3 Kgm at 3500 rpm.

Important

Do not exceed specified rotation speed limits under any running condition.

Timing system

Desmodromic *(type) with two valves per cylinder, operated by four rockers (2 opening rockers and 2 closing rockers) and an overhead camshaft. It is operated by the crankshaft through spur gears, belt rollers and toothed belts.*

Desmodromic timing system *(fig. 70)*
1) Opening (or upper) rocker arm.
2) Opening rocker arm shim.
3) Split rings.
4) Closing (or lower) rocker arm shim.
5) Return spring for lower rocker arm.
6) Closing (or lower) rocker arm.
7) Camshaft.
8) Valve.

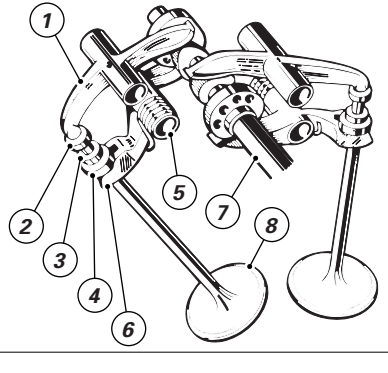


fig. 70

Performance data
Maximum speed in any gear should be reached only after a correct running-in period with the motorcycle properly serviced at the recommended intervals.
Max. speed (rider alone):
195 Kph.

Brakes

Front brake
Double drilled disc.
Braking surface material:
stainless steel.
Disc diameter:
320 mm
Hydraulically operated by a control lever on right handlebar.
Braking surface:
88 sq cm.
Brake calipers with separate pistons.
Make:
BREMBO
Type:
30/34-4 pistons
Friction material:
FERIT I/D 450 FF.
Master cylinder type:
PS 16.

Rear brake
With fixed drilled disc.
Braking surface material:
stainless steel.
Disc diameter:
245 mm.
Hydraulically operated by a pedal on RH side.
Braking surface:
32 sq cm.
Make:
BREMBO
Type:
P 34 C.
Friction material:
FERIT I/D 450 FF
Master cylinder type:
PS 11.

Warning
Brake fluid can dissolve paintwork and cause severe eye and skin injuries in the event of accidental spilling. Wash the affected area with abundant running water.

Transmission

Clutch:
wet multi-plate clutch.
Clutch is operated by a control lever on left handlebar.
Drive is transmitted from engine to gearbox main shaft via spur gears.
Gear ratio:
33/61 .
Gearbox:
5-speed .
Gearbox with constant mesh gears, gear change pedal on left side of motorcycle.
Front/rear sprocket ratio:
15/44.

Total gear ratios:
1st gear 16/40
2nd gear 21/36
3rd gear 24/32
4th gear 27/29
5th gear 29/28

Drive chain from gearbox to rear wheel:
Make:
DID
Type:
520 VL4.
Size:
5/8"x1/4"
Links:
100.

Important
The above gear ratios are part of the homologated specifications and under no circumstances must they be modified.

If you wish to tune up your motorcycle for competitive trials, you may refer to Ducati Motor Holding S.p.A. who will be glad to provide information about the special ratios available. Relevant instructions and original spare parts are available from your local Dealer or authorised workshop.

Warning
If the rear sprocket needs replacing, contact a Ducati Dealer or an authorised workshop. If improperly replaced, this component could seriously endanger your safety and that or your passenger, and cause irreparable damage to your motorcycle.

Frame
Tubular trestle frame with upper section made of high-strength steel.
Steering angle (on each side):
28°
Headstock angle:
24°
Trail:
96 mm.

Tyres

Front tyre
Tubeless, radial tyre.
Size:
120/70-ZR17.

Rear tyre
Tubeless, radial tyre.
Size:
160/60-ZR17.

Wheels
Three-spoke, light-alloy rims.

Front wheel
Make:
BREMBO
Dimensions:
3.50x17"

Rear wheel
Make:
BREMBO
Dimensions:
4.50x17".
Front wheel shaft can be removed.

Spark plugs
Make:
CHAMPION
Type:
RA 4 HC

As an alternative:
Make:
NGK
Type:
DCPR8E

Suspensions

Front

Hydraulic upside-down fork.
Stanchion diameter:
43 mm.
Travel along leg axis:
120 mm.

E

Rear

The rear shock absorber enables the adjustment of rebound and compression damping and spring preload. At the bottom pivot point it is connected to the swingarm. Swingarm is made from steel and hinges on a pivot pin passing through the engine. The whole system gives the bike excellent stability.
Shock absorber hydraulic damping varies with shock absorber travel.
Travel:
71 mm
Rear wheel travel:
136 mm

Available colors

Ducati matt black 248.514 (PPG)
Metal color rims and frame.
*Silver *0022 (PPG)*
Black rims and frame.

Electric system

Basic electric items are:
Headlamp *with double filament* ***12V-55/60 W*** *iodine bulb.*
12V-5W parking light.
Electrical controls *on handlebar.*
Turn indicators, ***12V-10W*** *bulbs.*
Horn.
Stop light switches.
Battery 12V-10 Ah.
Generator 12V-520W.
Electronic voltage regulator *(rectifier), protected by a* ***40 A*** *fuse located on the side of the battery.*
Starter motor, 12V-0.7 kW.
Tail light, 12V-5/21W *double-filament bulb for stop light and parking light;* ***12V-5W*** *bulb for number plate light.*

Note

See "Replacing bulbs" on page 53 for relevant instructions.

Fuses

The main fuse box is located on the left side of the battery (fig. 71).
To expose the fuses, take off the box protective cover (1). Mounting position and ampere capacity are marked on box cover.
Only 6 fuses are connected. There are two spare fuses.

The 40A fuse (2) placed on the RH side of the battery (fig. 71) protects the electronic regulator.
Remove the fuse cap (3) to expose it.

A blown fuse is identified by the interrupted inner filament (4, fig. 72).

Important

Switch the ignition key to ***OFF*** *before replacing a fuse to avoid possible short circuits.*

Warning

Never use a fuse with a rating other than specified. Failure to observe this rule may damage the electric system or even lead to fire.

E

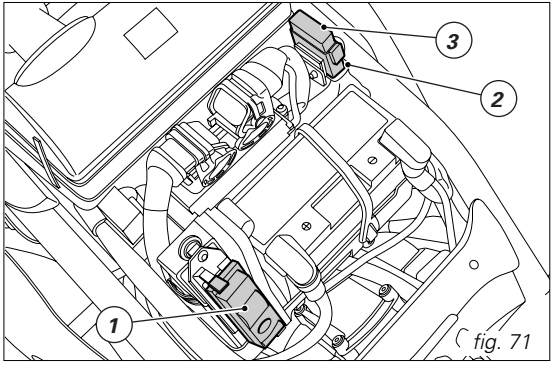
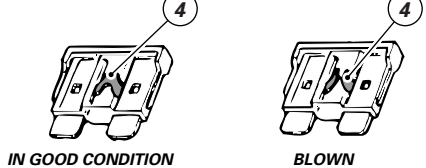


fig. 71



IN GOOD CONDITION **BLOWN**

fig. 72

Injection /electric system diagram key

1) RH switch.
2) Transponder Aerial.
3) Key-operated switch.
4) Main relay.
5) Fuse box.
6) Horn.
7) Starter motor.
8) Starter contactor.
9) Battery.
10) Regulator fuse.
11) Regulator.
12) Generator.
13) RH rear turn indicator.
14) Tail light.
15) Number plate light.
16) LH rear turn indicator.
17) Fuel tank.
18) Self-diagnosis connection.
19) Speed sensor.
20) Self-diagnosis power outlet.
21) Side stand switch.
22) Rear stop light switch.
23) Horizontal cylinder coil.
24) Vertical cylinder coil.
25) Horizontal cylinder spark plug 1.
26) Vertical cylinder spark plug 2.
27) Injection relay
28) Horizontal cylinder injector
29) Vertical cylinder injector.
30) Throttle position sensor.

31) Timing/rpm sensor.
32) Oil temperature sensor (control unit).
33) 5.9 M E.C.U.
34) Neutral switch.
35) Oil pressure switch.
36) Front stop light switch.
37) Clutch switch.
38) Oil temperature sensor (instrument panel).
39) LH switch.
40) Air temperature/pressure sensor.
41) Instrument panel.
42) LH front turn indicator.
43) Headlight.
44) RH front turn indicator.
45) 24-pole release conn.

Wiring Colour Coding

B *Blue*
W *White*
V *Violet*
Bk *Black*
Y *Yellow*
R *Red*
Lb *Light Blue*
Gr *Grey*
G *Green*
Bn *Brown*
O *Orange*
P *Pink*

Fuse box key *(4)*

Pos.	*El. item*	*Val.*
1-9	*Main*	*30 A*
2-10	*Parking light, HIGH/LOW beam, speed sensor and solenoid starter*	*15 A*
3-11	*ECU*	*3 A*
4-12	*Stop, horn, passing and key on*	*15 A*
5-13	*Instrument panel*	*3 A*
6-14	*Injection (injector pump, coil)*	*20 A*

Note
The system wiring diagram is at the end of this manual.

FOR UNITED STATES OF AMERICA VERSION ONLY

Reporting of safety defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Ducati North America. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Ducati North America. To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 366-0123 in Washington, D.C. area) or write to: NHTSA, U.S. Department of Transportation, Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from the Hotline.

Safety warnings

Traffic Rules vary from jurisdiction to jurisdiction. Know the regulations in your jurisdiction before riding this motorcycle.

Warning

This motorcycle is designed and intended for use on streets and other smooth, paved areas only. Do not use this motorcycle on unpaved surfaces. Such use could lead to upset or other accident.

Noise emission warranty

Ducati Motor S.p.A. warrants that this exhaust system, at the time of sale, meets all applicable U.S. EPA Federal noise standards. This warranty extends to the first person who buys this exhaust system for purposes other than resale, and to all subsequent buyers. Warranty claims should be directed to: Ducati North America, Inc., 237 West Parkway, Pompton Plains, New Jersey, 07444-1028 Tel: 001.973.839-2600 • Fax: 001.973.839-2331.

Noise and exhaust emission control system information

Source of Emissions

The combustion process produces carbon monoxide and hydrocarbons. Control of hydrocarbons is very important because under certain conditions, they react to form photochemical smog when subjected to sunlight. Carbon monoxide does not react in the same way, but is toxic. Ducati utilizes lean carburetor settings and other systems to reduce carbon monoxide and hydrocarbons.

Exhaust Emission Control System

The Exhaust Emission Control System is composed of lean carburetor settings, and no adjustments should be

made except idle speed adjustments with the throttle stop screw. The Exhaust Emission Control System is separate from the crankcase emission control system.

Crankcase Emission Control System
The engine is equipped with a closed crankcase system to prevent discharging crankcase emissions into the atmosphere. Blow-by gas is returned to the combustion chamber through the air cleaner and the throttle body.
Evaporative Emission Control System
California motorcycles are equipped with an evaporative emission control system which consists of a charcoal canister and associated piping. This system prevents the escape of fuel vapors from the throttle body and fuel tank.

Tampering warning
Tampering with Noise Control System Prohibited. Federal Law prohibits the following acts or causing thereof:
(1) the removal or rendering inoperative by any person, other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use; or
(2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:
(1) Removal of, or puncturing the muffler, baffles, header pipes or any other component which conducts exhaust gases.
(2) Removal or puncturing of any part of the intake system.
(3) Lack of proper maintenance.
(4) Replacing any moving part of the vehicle, or parts of the exhaust or intake system, with parts other than those specified by the manufacturer.
This product should be checked for repair or replacement if the motorcycle noise has increased significantly through use. Otherwise, the owner may become subject to penalties under state and local ordinances.

Problems that may affect motorcycle emissions
If you are aware of any of the following symptoms, have the vehicle inspected and repaired by your local Ducati dealer.
Symptoms:
Hard starting or stalling after starting.
Rough idle.
Misfiring or backfiring during acceleration.
After-burning (backfiring).
Poor performance (driveability) and poor economy.

Riding safety

The points given below are applicable for every day motorcycle use and shoud be carefully observed for safe and effective vehicle operation.
A motorcycle does not provide the impact protection of an automobile, so defensive riding in addition to wearing protective apparel is extremely important.
Do not let protective apparel give you a false sense of security.
Before changing lanes, look over your shoulder to make sure the way is clear. Do not rely solely on the rear view mirror; you may misjudge a vehicle's distance and speed, or you may not see it at all.
When going up steep slopes, shift to a lower gear so that there is plenty of power to spare rather than overloading the engine.
When applying the brakes, use both the front and rear brakes. Applying only one brake for sudden braking may cause the motorcycle to skid and lose control.
When going down long slopes, control vehicle speed by closing the throttle. Use the front and rear brakes for auxiliary braking.
Riding at the proper rate of speed and avoiding unnecessarily fast acceleration are important not only for safety and low fuel consumption but also for long vehicle life and quieter operation.
When riding in wet conditions or on loose roadway surfaces, the ability to maneuver will be reduced. All of your actions should be smooth under these conditions. Sudden acceleration, braking or turning may cause loss of control.
When the roadway is wet, rely more on the throttle to control vehicle speed and less on the front and rear brakes.
The throttle should also be used judiciously to avoid skidding the rear wheel from too rapid acceleration or deceleration.
On rough roads, exercise caution, slow down, and grip the fuel tank with your knees for better stability.
When quick acceleration is necessary as in passing, shift to a lower gear to obtain the necessary power.
Do not down shift at too high an r.p.m. to avoid damage to the engine from overreving.
Avoiding unnecessary weaving is important to the safety of both the rider and other motorists.
Do not exceed the legal speed limit or drive too fast for existing conditions. High speed increases the influence of any condition affecting stability and the loss of control.
Operate motorcycle only at moderate speed and out of traffic until you have become thoroughly familiar with its operation and handling characteristics under all conditions. This is a very high performance motorcycle, designed and intended for use by experienced careful riders only!
A new motorcycle must be operated according to a special break-in procedure (see Running in recommendations).

Warning

Before starting engine, check for proper operation of brake, clutch, shifter, throttle controls, correct fuel and oil supply.

E
USA

Gasoline is extremely flammable and is explosive under certain conditions. Refuell in a well ventilated area with the engine stopped. Do not smoke or allow open flames or sparks when refuelling or servicing the fuel system. Always close the fuel petcock when the engine is not running to prevent flooding of the throttle body. Do not overfill fuel tank (see instructions page 38).
Motorcycle exhaust contains poisonous carbon monoxide gas. Do not inhale exhaust gases and never run the engine in a closed garage or confined area.
Use only Ducati approved parts and accessories.
This motorcycle was not intended to be equipped with a sidecar or to be used to tow any trailer or other vehicle. Ducati does not manufacture sidecars or trailers and cannot predict the effects of such accessories on handling or stability, but can only warn that the effects will be adverse and any damage to motorcycle components caused by the use of such accessories will not be remedied under warranty.

Warning
Do not ride the motorcycle with helmets attached to the hook; the helmets could cause an accident by distracting the operator or interfering with normal vehicle operation.

Protective apparel
Always wear a helmet. Most motorcycle accident fatalities are due to head injuries.
For safety eye protection, gloves, and high top, sturdy boots should also be worn.

The exhaust system becomes very hot during operation, never touch the exhaust system. Wear clothing that fully covers your legs. Do not wear loose clothing which could catch on the control levers, footrests, wheels, or chain. Any amount of alcohol will significantly interfere with your ability to safely operate your motorcycle. Don't drink and ride.

Vehicle identification number (VIN);
Every Ducati motorcycle is identified by two identification numbers (see page 9). Figure A specifically shows the frame identification numbers.

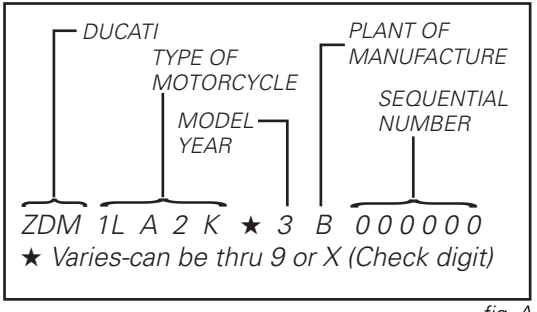
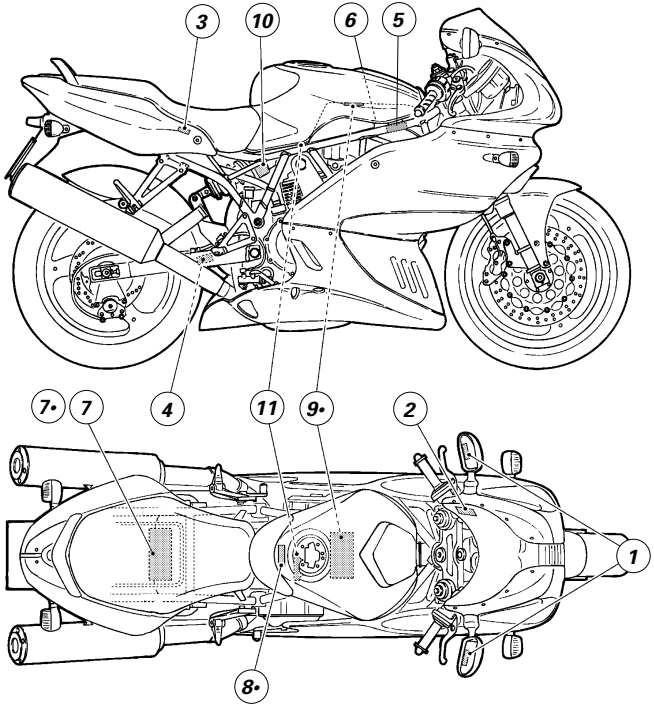


fig. A

Label location *(fig. B)*



● ***only for California***

fig. B

OBJECT IN MIRROR ARE CLOSER THAN THEY APPEAR

1

WARNING

DO NOT ATTEMPT TO LOOK THROUGH THIS FAIRING. THIS IS NOT A WINDSHIELD, BUT AN AERODYNAMIC FAIRING ONLY; FAILURE TO OBSERVE THIS WARNING COULD RESULT IN A COLLISION OR UPSET AND CONSEQUENT SERIOUS BODILY INJURY.

2

HELMET HOLDER UNDER THE SEAT

3

Tensione catena (sul cavalletto centrale)
Chain Tension Adjustment (on centre stand)

4

MOTORCYCLE NOISE EMISSION CONTROL INFORMATION

THIS [redacted] MOTORCYCLE, Z[redacted]
MEETS EPA NOISE EMISSION REQUIREMENTS OF 8[redacted]BA AT 46[redacted]PM BY THE FEDERAL TEST PROCEDURE.
MODIFICATIONS WHICH CAUSE THIS MOTORCYCLE TO EXCEED FEDERAL NOISE STANDARDS ARE PROHIBITED BY FEDERAL LAW.
SEE OWNER'S MANUAL.

5

Manufactured by **DUCATI**MOTOR spa DAT[redacted]7/97

GVWR: [redacted] Lbs ([redacted] kg)
GAWR front: [redacted] Lbs ([redacted] kg) with [redacted] tire, [redacted] RIM at [redacted] cold.
GAWR rear: [redacted] Lbs ([redacted] kg) with [redacted] tire, [redacted] RIM at [redacted] cold.
This vehicle conforms to all applicable Federal Motor Vehicle Safety standards in effect on the date of manufacture shown above. Type classification: Motorcycle

Vehicle I.D. No.: ZDM1T B9PXWB000001

6

VEHICLE EMISSION CONTROL INFORMATION

Engine displacement: 904 cc
Engine family: [redacted]
Engine exhaust control system: [redacted]

THIS VEHICLE CONFORMS TO U.S. EPA REGULATIONS APPLICABLE TO 1[redacted] MODEL YEAR NEW MOTORCYCLES

ENGINE TUNE-UP SPECIFICATIONS

ITEM	SPECIFICATIONS	INSTRUCTIONS
IGNITION TIMING:	[redacted] bTDC at idle speed	No adjustment
IDLE SPEED (RPM):	[redacted] ± 0.12 mm	No adjustment
IDLE MIXTURE:		No adjustment
	Opening [redacted] mm	See Service Manual
VALVE CLEARANCE (in & ex):		
	Closing [redacted] mm	
SPARK PLUG: CHAMPION R[redacted]		
SPARK PLUG GAP (mm): 0.5 ÷ 0.6	OIL: SAE 20W50	
	FUEL: Unleaded gasoline	

DUCATIMOTOR spa - BOLOGNA - ITALY

7

VEHICLE EMISSION CONTROL INFORMATION

Engine displacement: 904 cc
Engine family: [redacted]
Engine exhaust control system: [redacted]
Evap family: [redacted]

THIS VEHICLE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 19[redacted] MODEL YEAR NEW MOTORCYCLES AND IS CERTIFIED TO 1.4 HC GRAM ENGINE FAMILY EXHAUST EMISSION STANDARD IN CALIFORNIA

ENGINE TUNE-UP SPECIFICATIONS

ITEM	SPECIFICATIONS	INSTRUCTIONS
IGNITION TIMING:	[redacted] bTDC at idle speed	No adjustment
IDLE SPEED (RPM):	[redacted] ± 0.12 mm	No adjustment
IDLE MIXTURE:		No adjustment
	Opening [redacted] mm	See Service Manual
VALVE CLEARANCE (in & ex):		
	Closing [redacted] mm	
SPARK PLUG: CHAMPION R[redacted]		
SPARK PLUG GAP (mm): 0.5 ÷ 0.6	OIL: SAE 20W50	
	FUEL: Unleaded gasoline	

DUCATIMOTOR spa - BOLOGNA - ITALY

7●

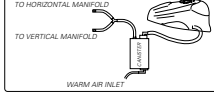
CAUTION

NEVER FILL TANK SO FUEL LEVEL RISES INTO FILLER NECK. IF TANK IS OVERFILLED, HEAT MAY CAUSE FUEL TO EXPAND AND FLOW INTO EVAPORATIVE EMISSION CONTROL SYSTEM RESULTING IN HARD STARTING AND ENGINE HESITATION.

8●

VEHICLE EMISSION CONTROL LABEL

ENGINE DISPLACEMENT : 904 cc. ENGINE FAMILY : [redacted]
THIS VEHICLE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO [redacted] MODEL YEAR NEW MOTORCYCLES.
EVAP FAMILY : [redacted]



9●

WARNING

CONTAINS HIGHLY COM-PRESSED GAS. USE ONLY PERFECTLY DRY NITROGEN GAS. OTHER GASES MAY CAUSE EXPLOSION. DO NOT INCINERATE. REFER TO OWNER'S MANUAL FOR REGULATING GAS.

10

11

California evaporation emission system

This system consists of (fig. C):
1) Warn air inlet;
2) Canister;
3) Dell'Orto jet;
4) Intake manifolds;
5) Breather pipe;
6) Fuel tank.

Important

In the event of fuel system malfunction, contact Ducati's authorized Service Centres.

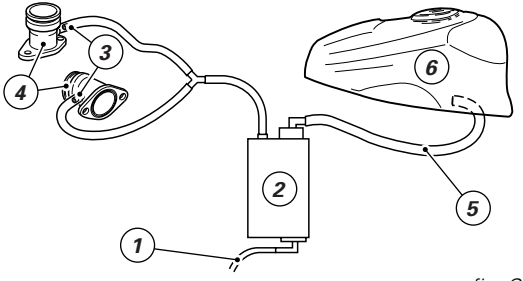


fig. C

Ducati limited warranty on emission control system

Ducati North America, Inc., 237 West Parkway, Pompton Plains, New Jersey 07444-1028 warrants that each new 1998 and later Ducati motorcycle, that includes as standard equipment a headlight, tail-light and stoplight, and is street legal:
A) is designed, built and equipped so as to conform at the time of initial retail purchase with all applicable regulations of the United States Environmental Protection Agency, and the California Air Resources Board; and
B) is free from defects in material and workmanship which cause such motorcycle to fail to conform with applicable regulations of the United States Environmental Protection Agency or the California Air Resources Board for a period of use, depending on the engine displacement,of 12,000 kilometers (7,456 miles), if the motorcycle's engine displacement is less than 170 cubic centimeters; of 18,000 kilometers (11,185 miles), if the motorcycle's engine displacement is equal to or greater than 170 cubic centimeters but less than 280 cubic centimeters; or of 30,000 kilometers (18,641 miles), if the motorcycle's engine displacement is 280 cubic centimeters or greater; or 5 (five) years from the date of initial retail delivery, whichever first occurs.

I. Coverage

Warranty defects shall be remedied during customary business hours at any authorized Ducati motorcycle dealer located within the United States of America in

compliance with the Clean Air Act and applicable regulations of the United States Environmental Protection Agency and the California Air Resources Board. Any part or parts replaced under this warranty shall become the property of Ducati.
In the state of California only, emissions related warranted parts are specifically defined by that state's Emissions Warranty Parts List. These warranted parts are: carburetor and internal parts; intake manifold; fuel tank, fuel injection system; spark advance mechanism; crankcase breather; air cutoff valves; fuel tank cap for evaporative emission controlled vehicles; oil filler cap; pressure control valve; fuel/vapor separator; canister; igniters; breaker governors; ignition coils; ignition wires; ignition points, condensers, and spark plugs if failure occors prior to the first scheduled replacement, and hoses, clamps, fittings and tubing used directly in these parts. Since emission related parts may vary from model to model, certain models may not contain all of these parts and certain models may contain functionally equivalent parts.
In the state of California only, Emission Control System emergency repairs, as provided for in the California Administrative Code, may be performed by other than an authorized Ducati dealer. An emergency situation occurs when an authorized Ducati dealer is not reasonably available, a part is not available within 30 days, or a repair is not complete within 30 days. Any replacement part can be used in an emergency repair. Ducati will reimburse the owner for the expenses, including diagnosis, not to exceed Ducati's suggested retail price for all warranted parts replaced and labor charges based on Ducati's recommended time allowance for the warranty repair and the geographically appropriate hourly labor rate. The owner may be required to keep receipts and failed parts in order to receive compensation.

II. Limitations
This Emission Control System Warranty shall not cover any of the following:
A. Repair or replacement required as a result of
(1) accident,
(2) misuse,
(3) repairs improperly performed or replacements improperly installed,
(4) use of replacement parts or accessories not conforming to Ducati specifications which adversely affect performance and/or
(5) use in competitive racing or related events.
B. Inspections, replacement of parts and other services and adjustments required for routine maintenance.
C. Any motorcycle on which odometer mileage has been changed so that actual mileage cannot be readily determined.

III. Limited liability
A. The liability of Ducati under this Emission Control Systems Warranty is limited solely to the remedying of defects in material or workmanship by an authorized Ducati motorcycle dealer at its place of business during customary business hours. This warranty does not cover inconvenience or loss of use of the motorcycle or

transportation of the motorcycle to or from the Ducati dealer. Ducati shall not be liable for any other expenses, loss or damage, whether direct, incidental, consequential or exemplary arising in connection with the sale or use of or inability to use the Ducati motorcycle for any purpose. Some states do not allow the exclusion or limitation of any incidental or consequential damages, so the above limitations may not apply to you.
B. No express emission control system warranty is given by Ducati except as specifically set forth herein. Any emission control system warranty implied by law, including any warranty of merchantability or fitness for a particular purpose, is limited to the express emission control systems warranty terms stated in this warranty. The foregoing statements of warranty are exclusive and in lieu of all other remedies. Some states do not allow limitations on how long an implied warranty lasts so the above limitation may not apply to you.
C. No dealer is authorized to modify this Ducati Limited Emission Control Systems Warranty.

IV. Legal rights
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

V. *This warranty is in addition to the Ducati limited motorcycle warranty.*

VI. Additional information
Any replacement part that is equivalent in performance and durability may be used in the performance of any maintenance or repairs. However, Ducati is not liable for these parts. The owner is responsible for the performance of all required maintenance. Such maintenance may be performed at a service establishment or by any individual. The warranty period begins on the date the motorcycle is delivered to an ultimate purchaser.

Ducati North America, Inc..
237 West Parkway
Pompton Plains, New Jersey, 07444-1028
001.973.839-2600

ROUTINE MAINTENANCE RECORD

km	Ducati Service Name	Mileage	Date
1000			
10000			
20000			
30000			
40000			
50000			